

THE  
HISTORY  
OF  
Four-footed Beasts,  
SERPENTS,  
AND  
INSECTS.



THE *Very Handwritten: -1-10-*  
**HISTORY**  
OF  
**Four-footed Beasts**  
AND  
**SERPENTS:**

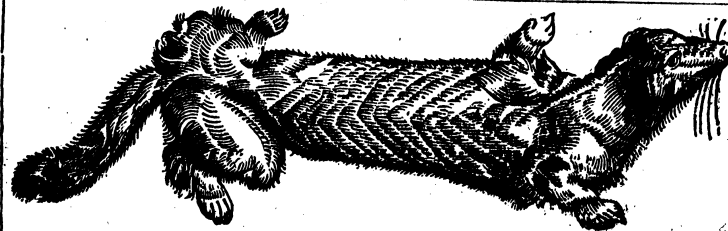
Describing at Large  
Their True and Lively *Figure*, their several *Names, Conditions,*  
*Kinds, Virtues* (both Natural and Medicinal) *Countries* of their Breed,  
their *Love and Hatred* to Mankind, and the wonderful work of  
God in their Creation, Preservation, and Destruction.

Interwoven with curious variety of Historical Narrations out of Scriptures,  
Fathers, Philosophers, Physicians, and Poets: Illustrated with divers Hieroglyphicks  
and Emblems, &c. both pleasant and profitable for Students in all Faculties and Professions.

Collected out of the Writings of CONRADUS GESNER  
and other Authors,  
By EDWARD TOPSEL.

Whereunto is now Added,  
The Theater of Insects; or, Lesser living Creatures:  
As Bees, Flies, Caterpillars, Spiders, Worms, &c. A most  
Elaborate Work: By T. MUFFET, Dr. of Physick.

The whole Revised, Corrected, and Inlarged with the Addition of Two  
useful Physical Tables, by J. R. M.D.



LONDON:

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the Bible in Little-Britain, and T. Johnson, at the Key in Pauls Church-yard. M DC LVIII.

TO THE  
RIGHT HONOURABLE  
THE  
Lord Marquesse  
OF  
DORCHESTER,  
Earl of KINGSTON,  
Vicount NEWARK, &c.

My very Noble LORD,



*Your Lordship well knows that Honour attends upon Virtue, as the shadow doth upon the substance; there is such a magnetick force in Goodness, that it draws the hearts of men after it. The world observes that Your Honour is a great Lover of the works of Learned Writers, which is an infallible argument of an excellent mind residing in You. Wherefore I here humbly offer unto Your Noble Patronage the most Famous and Incomparable History of CONRADUS GESNER, a great Philosopher and Physitian, who by his vast expences, and indefatigable pains, Collected and Digested into two Volumes, what ever he found scattered here and there in almost infinite Authors, concerning Fourfooted-Beasts and Serpents, adding also what he could possibly attain to by his own experience, and correspondence held with other famous Scholars every where. After him Mr. Edward Topsel a Learned Divine, Revised and Augmented the same History; as it is not altogether so difficult to add something to what is first begun, and to build upon such a foundation which was before so artificially laid. He hath deserved well of our English Nation in so doing; and the more, that he doth with so much modesty attribute the praise of the whole work to the Master-workman to whom it was chiefly due. The same Gesner, after Mr. Edward Wotton had begun, undertook to compose the History of Insects; which as it is a business of more curiosity and difficulty to write exactly of; so all things considered, they serve as much to set forth the Wisdom and Power of God as the greatest Creatures he hath made, and are as beneficial to Mankind, not only for dainty Food, but for the many Physical uses that arise from them. John Baptist fed upon Locusts and*

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wilde Honey, and we read that our Saviour eat a piece of a Honey comb. These little Insects are not so contemptible as the World generally thinks they are, for they can do as much by their multitudes, as the other can by their magnitude, when as one Hornet shall be able suddenly to kill a Horse, and Gnats, Ants and Wasps to bid resistance to Bears, Lions and Elephants, and to depopulate whole Countries. The Frogs, Locusts, and Lice, were none of the least Judgements in the Land of Egypt. Mr. Thomas Pennius, another Physician, lighting his Candle by the former lights, succeeded them in this great undertaking. But all these vigilant and painful Men never could bring it to perfection, being every one of them prevented by death. And indeed, things of deep search, and high concernment, are very seldom begun and ended by the same persons. Hippocrates gives the reason for it, that Art is long, Life short, Experience difficult, occasion precipitate, Judgement uncertain. I may say farther, which he also comprehends in the close of that Aphorism, that all must perform their several offices: which is not often done, but ingenious men frequently labour under the want of means, and find small encouragement to proceed in their great designs, especially in this latter age of the World. Gesner makes a sad complaint in behalf of himself, and Topsel doth the like, and so do all the rest who spent their Estates, and wasted their Spirits for the common good. Which is sufficient proof to convince many rich men of blindness and ingratitude, and confirms that truth the Poet speaks;

Haud facile emerguunt, quorum virtutibus obstat  
Res angusta domi —————

Good and well meaning men cannot proceed,  
Virtue is crusht by want, oppress'd by need.

After the death of the forementioned four Worthies of their times, Mr. Thomas Muffet a noted English Physician undertook the same task, and compleated it; whose Encomium is excellently well penned by the late Honourable Doctor of Physick Sir Theodore Mayerne, in his Epistle to Doctor William Paddy of famous memory, premised to this Book; wherein to his own immortal praise, he hath so Anatomically dissected many of the chiefeſt Insects, even to admiration, that he hath let the World understand by it, that he was a deep Philosopher, and a most accurate searcher into the secrets of Nature, and worthy of those places of Honour he enjoyed in Great Princes Courts. This large History is not, nor could possibly be the production of one Age; both able Divines, and Physicians contributed what they had, and employed their Talents, and greatest Studies, for many years in their severall generations, to bring it forth; whereby it may appear both necessary this Work is for the souls and bodies of Men, to teach them to know the Wisdom and Omnipotence of God in the Creation of these Creatures, and Goodness to bestow them upon Man, both for profit and delight; and though many of them be Dangerous and Venomous, yet they were not so when God first made them. For the Wiseman saith, That God made not death, neither takes he pleasure in the destruction of the living, for he created all things that they might have their being, and the Generations of the World were beathful, and there was no poison of destruction in them, no Kingdom of death upon the earth, but ungodly

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men by their wicked works and words, called it to them. This Book will plentifully furnish us with Remedies against most of these inconveniences, which is no small occasion to put us in mind how much we stand obliged to the memories of the learned Authours of it; who spared no cost nor pains that they might prove beneficial to the then present, and to succeeding Ages. And the same reason is very strong in behalf of those who now have been at this vast charge to Reprint and to perfect the same, that it never should be lost by time or casualties, which consume all things; and to supply the whole Work with a double Physical Index, to ease the Readers labour, that he might not wander up and down, and lose himself in this great wilderness of Beasts and Insects, searching after that he stands in need of, but may in an instant be provided with all those known remedies these several Creatures can afford him. Should such a Fabrique as this decay and come to ruine, the damage were unspeakable and irreparable; the Mausolean Sepulchre, the Colossus of Rhodes, or the Pyramids of Egypt might sooner be renewed and built again. Wherefore Men are bound in conscience, by the Laws of God, of Nature, and of Nations, to consider of the great Expence and Pains now taken in it, and to promote the Work to the best advantage of the present undertakers for the publick good, who have now brought it to this perfection, that they may say of it, what Ovid did of his Metamorphosis;

Jamque opus exegi, quod nec Jovis ira, nec ignis,  
Nec poterit ferrum, nec edax abolere vetustas.

The Work is ended, which can envies fume,  
Nor Sword, nor Fire, nor wasting time consume.

Never was there so compleate a History of the Creatures as this is since the daies of Solomon, who writ the story of Beasts and Creeping things: and indeed it requires a Kingly Treasure and Understanding to accomplish it. And Petrus Gillius writes, that in former Ages, all the Histories of Creatures were compiled by Kings, or Dedicated to them; who are best able to bear the charge of it, and most fit to be honoured with it. What would the World now give for that Book of Solomons, which by the negligence of ungrateful men and length of time is utterly lost? How highly then ought we to esteeme of this History of Gesner and Muffet, which is inferiour to none but that? For what Aristotle set forth upon this subject at the appointment of Alexander the Great, and for which he received from him 400 Talents as a Kingly reward, is all comprehended in this, with the addition of many hundreds more that have travelled in the same way. Orpheus, whom the Poets so much magnifie for drawing the Beasts after him, could do no more with all his melodious harmony, then these famous and ingenious Men have done. And because I cannot but think, what the Poets fancied concerning him, was but an Hieroglyphical representation (according to the dim light they had) of all the Creatures coming to Noah into the Ark, this History seems to me to be like another Ark of Noah, wherein the several kinds of beasts are once again met together, for their better preservation in the understanding of Man; & however there were multitudes of Birds in the Ark which are not here (it may be because Aldrovandus and others have

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written largely to that purpose) yet here are abundance of Insects that never were in Noahs Ark, and whereof we never had, or we can find extant, any complete History untill this was made; which is like to another Paradise, where the Beasts, as they were brought to Adam, are again described by their Natures, and named in most Languages; which serves to make some reparation for the great loss of that excellent knowledge of the Creature, which our first Parents brought upon their posterity when they fell from God. We read in the 10th. of the Acts, that when a vessel was let down from heaven, wherein there were all manner of Fourfooted-Beasts and Creeping things, that St. Peter wondered at it: who then can choose but admire to see so many living Creatures that Nature hath divided and scattered in Woods, Mountains and Vallies, over the face of the whole earth, to come all together to a general muster, and to act their several parts in order upon the same Theater? I confess there are many Men so barbarous, that they make no account of this kind of learning, but think all charge and pains fruitless that is employed this way; shewing themselves herein more unreasonable and brutish then the irrational Beasts. For next unto Man are these Creatures rankt in dignity, and they were ordained by God to live upon the same earth, and to be Fellow-commoners with Man; having all the Plants and Vegetables appointed them for their food as well as Man had; and have obtained one privilege beyond us, in that they were created before Man was; and ever since they are obnoxious to the same casualties, and have the same coming into the World, and going out that we have; For that which befalls the Sons of Men befalls Beasts, even one thing befalls them both, as the one dyeth, so dyeth the other; so that Man hath no preeminence above the Beasts. All go unto one place, all are of the dust, and all return to dust again: Ecclesi. 3. 19, 20. And the Prophet David doubts not to compare Man being in honour, and having no understanding, unto the Beasts that perish. As for Minerals, they are yet another degree below Beasts, all the Gold, Jewels, and Diamonds in the World, are not comparable to any one of the meanest Creatures that hath within it the breath of life. God hath bountifully bestowed them all on Man, whom he hath advanced above them all, for food, and raiment, and other necessary uses; also for his pleasure and recreation: and so long as we use them with Sobriety and Thankfulness, we shall finde an infinite benefit and advantage by them; but when we prove ungratefull unto God, they become so many Instruments of his vengeance against sinners, to make up that fourfold Judgement, with the Sword, Famine, and Pestilence, the Prophet threatens the Jews with. I fear to be tedious, therefore I beseech Your Honour to accept this History in good part from him who humbly prayeth for Your Lordships temporal and eternal happiness, and who is

Your Honours most affectionately

humble Servant

JOHN ROVLAND.

To the Reverend and Right Worshipful  
RICHARD NEILE, D. of Divinity,  
Dean of Westminster, Master of the Savoy,  
and Clerk of the King his most Excellent Majesties Closet;  
all felicity Temporal, Spiritual, and Eternal.



HE Library of English Books, and Catalogue of Writers, (Right Worthy and Learned DEAN, my most respected PATRON) have grown to the height, not only of a just number, but almost innumerable: and no marvel, for God himself hath in all ages preserved Learning in the next place to Life; for as Life is the Ministerial Governor and Mover in this World, so is Learning the Ministerial Governor and Mover in Life: As an Interpreter in a strange Country is necessary for a Traveller that is ignorant of Languages (or else he should perish,) so is Knowledge and Learning to us poor Pilgrims in this our Perigration, out of Paradise unto Paradise; whereby confused BARBARE tongues are again reduced to their significant Dialects, not in the builders of BABEL to further and finish an earthly Tower, but in the builders of JERUSALEM, to bring them all to their own Country which they seek, and to the desired rest of souls. *Littera obstrices artium, quarum beneficio ab interitu vindicantur.* As Life is different and divers, according to the Spirit wherein it is seated, and by which it is nourished as with a current; so also is Learning, according to the taste, use, and practise of Rules, Canons, and Authors, from whom as from a Fountain it taketh both beginning and encrease: even as the spirit of a Serpent is much quicker then the spirit of an Ox; and the Learning of Aristotle and Pliny more lively and lightsome then the knowledge of other obscure Philosophers, unworthy to be named, which either through Envy or Non-proficiency durst never write. *Si cum hac exceptione datur sapientia, ut illam incusam teneam, nec enuntiem, rejiciam. Nullius boni sine socio jucunda est possessio.* And therefore I say with Petrus Blesensis: *Scientiarum generosa possessio in plures dispersa, non perditur, & distributa per partes, minorationis detrimentum non sentit: sed eo disturnius perpetuata senescit, quo publicata fecundius se diffundit.*

The greatest men stored with all helps of Learning, Nature and Fortune, were the first Writers, who as they did excell other men in Possessions and Worldly dignity, so they manifested their Virtues and Worth in the edition of excellent parts of knowledge, either for the delight or profit of the World, according to the Poets profession:

*Aut prodesse volunt, aut delectare Poetae,  
Aut simul & jucunda & idonea dicere vita.  
Omne tulit punctum, qui miscuit utile dulci,  
Lectorem delectando, pariterque monendo.*

Yet now of late daies this custom hath been almost discontinued to the infinite prejudice of sacred inviolable Learning and Science, for Turpin *sape fama dicitur minoribus,* (as Ausonius wrote in his time) for indeed the reason is pregnant:

Hand

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*Haud facile emergunt, quorum virtutibus obstat  
Res angusta domi.*

But yet the great Rector and Chancellor of all the Academies in the World *Iesus Christ*, in whom are hid all the treasures of wisdom and knowledge, the Master of that Colledge wherein he was but a Servant or Steward, that was learned in all the learning of the Egyptians, (I mean *Moses*) the first writer, the first Author, the first commander of knowledge, and the first ordainer of a lawful Common-wealth, and Ruler of Church and State, hath not left our age without some monuments of great Princes, Earls, Lords, Knights, for the ornament and honour of Learning, who for general and particular causes and benefits have added their Names to the society of Writers, and divulged their works in Print, which are likely to be remembered till the Worlds end. Such are our most Temperate, Just, Wise, and Learned King and Sovereign. The Right Noble, and Honourable Earl of *Surry*, long ago departed out of this earthly *Horizon*. The now living Earls of *Dorset*, *Northampton*, *Salisbury*; and many Knights, *Sir Philip Sidney*, *Sir George Moore*, *Sir Richard Baskett*, *Sir Francis Hastings*, and others. But of *Aarons*, and such as sit at the Helme of the Church, or are worthily advanced for their knowledge in Learning and State, I mean both Bishops and Doctors, almost innumerable, of all whom I can say no more, if I were worthy to say any thing, then apply unto them particularly that which was said of one of the greatest Scholars and Divines that ever *England* had:

*— Dic obsecro sancta  
Posteritas, nec enim mihi fas est dicere: tantum  
De tantis tacitum, aut tantos audire iuvabit.*

Then why should I presume, being every way the least and meanest of all other, now the third time to publish any part of my conceived studies for the age present and succeeding, and so to have my Name enrolled amongst the benefactors and Authors of Learning?

*— Non omnia grandior aevi  
Quae fugimus habet, seris venit usus ab annis.*

Alas Sir, I have never abounded in any thing, except want and labour, and I thank God that one of these hath been prepared to feed the other, therefore I will not stand upon any mans objections, who like *Horses* as it is in the Fable being led empty, well fed, and without burden, do scorn the laden *Ass*, adding misery to his load, till his back was broke, and then was all laid upon the pumpled disdainful *Horse*: even so these proud displeasing spirits are eased by the labors of us that bear the burthens, and if they content not themselves with ease, but will also sit in the fear of the scornful, let them remember, that when our backs be broke, they must take up the carriage. But pardon me (I beseech you) if by way of Preface I open my heart unto your Worship, who is better able than ten thousand of the *Homus's*, and more charitably generous in receiving such gifts with the right hand (as these are) although they were given with the left; for seeing I have chosen you the Patron of this Work, I will briefly declare and open my mind unto you concerning the whole Volum, spiring any other praises of your demerits then those which by *Martial* are ascribed to *Regulus*, which I will without flattery or fear of the envious thus apply unto you:

*Cum sit Sophia par fama & cura deorum, [SSS. Trinitatis]  
Ingenio pietas nec minor ipsa tuo.  
Ignorat meritis dare munera, quis ibi librum  
Et qui maratur [Neille] Tibi dari.*

So then leaving these perorations, I will endeavor to prove unto you that this Work which I now publish and divulge unto the world, under the Patronage of your Name, is Divine, and necessary for all men to know; True, and therefore without slander or suspicious

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scandall to be received; and that no man ought rather to publish this unto the World, then a Divine or Preacher. For the first, that the knowledge of Beasts, like as the knowledge of the other creatures and works of God, is Divine, I see no cause why any man should doubt thereof, seeing that at the first they were created and brought to man as we may read *Gen. 1. 24, 25.* and all by the Lord himself, so that their Life and Creation is Divine in respect of their Maker; their naming Divine, in respect that *Adam* out of the plenty of his own divine wisdom, gave them their several appellations, as it were out of a fountain of Prophecie, foreshewing the nature of every kind in one elegant and significant denomination, which to the great losse of all his children was taken away, lost and confounded at *Babel*. When I affirm that the knowledge of Beasts is Divine, I do mean not other then the right and perfect description of their Names, Figures, and Natures, and this is in the Creator himself most Divine, and therefore such as is the Fountain, such are the streams issuing from the same into the minds of men. Now it is most clear in *Genesis* how the Holy Ghost remembreth the creation of all living creatures, and the Fourfooted next before the creation of Man, as though they alone were appointed the Ushers, going immediately before the race of Men. And therefore all the Divines observe both in the *Hebrew*, in the *Greek* and *Latin*, that they were created of three several sorts or kinds. The first *Jumentum*, as Oxen, Horses, Asses and such like, *Quia hominum iuvamenta*. The second, *Reptile, quia hominum medicina*. The third, *Bestia, a vastando*, for that they were wilde and depopulators of other their associates, rising also against Man, after that by his fall he had lost his first image and integrity. Now were it not a knowledge Divine, why should the holy Scriptures relate it, and divide the kinds? Yea, why should all holy Men take examples from the natures of Beast, Birds, &c. and apply them to heavenly things, except by the ordinance of God they were both allowed and commanded so to do: and therefore in admiration of them the Prophet *David* cryeth out, *Quam magnifica sunt opera tua Domine! omnia in sapientia fecisti*. The old *Manichees* among other blasphemies accused the creation of hurtful, venomous, ravening, and destroying Beasts, affirming them to be made by an evil God, and also they accused the creation of Mice and other unprofitable creatures, because their dulness was no kinder to the Lord, but like cruel and covetous Misers, made no account of those Beasts, which brought not profit to their purse. You know (Right Learned Dean) how that grave Father answered that calumny, first affirming that the same thing which seemed idle to Men, was profitable to God; and the same that appeared ugly to them, was beautiful to him, *Qui omnibus visitur ad gubernationem universi*. He therefore wisely compareth a fool that knows not the use of the creatures in this world, to one ignorant that cometh into the workhouse of a cunning Man, viewing a number of strange tools, and having no cunning but in an Axe or a Rake, thinketh that all those rare inventions of a wise workman are idle toys; and whilst thus he thinketh, wandering to and fro, not looking to his feet, suddenly falleth into some furnace in the same Work-house, or chance to take up some sharp tool whereby he is wounded, then he also thinketh that the same are hurtful and dangerous. *Quorum tamen usum quia novit artifex, insipientiam ejus irritat, & verba inepta non curans officinam suam constanter exercet*. But we that are ashamed to deny the use of instruments in the shops of rare Artisans, but rather admire their invention, yet are not afraid to condemn in Gods storehouse sundry of his creatures, which are rare inventions, although through folly we be wounded or harmed by them, and therefore he concludeth that all Beasts are either *utilia*, and against them we dare not speak; or *perniciosa*, whereby we are terrified that we should not love this perilous life; or else they are *superflua*, which to affirm were most ridiculous: for as in a great house all things are not for use, but some for ornament, so is it in this World, the inferior Palace of God. Thus for *Ansin*.

Therefore I will conclude this first part, that not only the knowledge of the profitable creature is divine, and was first of all taught by God, but also of the hurtful: For a wise Man, saith *Solomon*, seeth the Plagues (by the revelation of God) and hideth himself from it. And *John Baptist*, *Quis vos docuit ab ira veniura fugire*: These things have I principally laboured in this Treatise, to shew unto Men what Beasts are their friends, and what their enemies, which to trust, and which avoid, in which to find nourishment, and which to shun as poison. Another thing that perswadeth me in the necessary use of this History, that it was divine, was the preservation of all creatures living, which are ingendred by copulation (except Fishes) in the Ark of *Noah*, unto whom it pleased the Creator at that time to infuse an instinct, and bring them home to man as to a fold: surely it was for that a man

might gain out of them much Divine knowledge, such as is imparted in them by Nature, as a type or spark of that great wisdom whereby they were created: In Mice and Snakes a foreknowledge of things to come, in the Ant and Pismire a providence against old age in the Bear the love of young; in the Lion his stately pace; in the Cock and Sheep change of weather; as S. Basil in his *Hexameron*, *Etiam in Brutiis quidem futuri sensus sensus nos præsentit vicia non addidit finis, sed de futuro sæculo omne studium habemus.*

For this cause there were of Beasts in holy Scripture three holy uses, one for Sacrifice, another in Vision, and a third for Reproof and Instruction.

In Sacrifices were the clean Beasts, which Men were bound first to know, and then to offer; for it is unreasonable that those things should be sacred at the Lords altar, which are refused worthily at private mens Tables: Now although we have no use of Sacrificing of Beasts, *Nam sicut bruta pro peccatis immolabantur, ita jam vicia pro corporibus;* yet we have use of clean Beasts for food and nourishment, and therefore for the enriching of the minds and tables of men; it is necessary to know not only the liberty that we have to eat; but also the quality and nutriment of the Beast we eat, not for any Religion, but for health and corporal necessity. This point is also opened in this story, and the other of Sacrifice, wherein I have not omitted to speak of the Divine use of every Beast, both among the *Jews* and among the prophane *Gentiles*.

Now for the second holy use of Beasts in Visions, the Prophet *Daniels* Visions, and *Ezekiels*, and S. *Johns* in the *Revelation* do testify of them, whereby the most Divines have observed how great Princes and Kingdoms after they have shaken off the praife of Justice and Pietie, turn Tyrants and ravening Beasts. For so Man being in honour understandeth not, but becometh like the Beasts that perish, and so as *Dionysius* saith by Visions of Beasts, *Infima reducuntur per media in suprema.* Now there were, as S. *Augustine* saith, three kinds of visions, *Sensibiles, intellectuales, & imaginaria*: the first were most pregnant, because to the understanding and conceiving, a Man never lost his senses, and therefore God did suddenly create savage Beasts both of natural and extraordinary shapes, whereby he shewed to his servants the Prophets, the ruine or uprising of beastly States and Kingdoms. And not only thus, but also in heaven (as St. *John* saith) there are 4 Beasts full of eyes before the throne of God; both which must needs magnifie the knowledge of these *Quadrupedes*; for seeing God hath used them as Sacraments or Mysteries to contain his will, (not only in monstrous treble-headed, or seven-horned shapes, but also) in pure, ordinary, natural limbs and members; how shall we be able to ghesse at the meaning in the secret, that do not understand the revealed? And what use can we make of the invisible part of that Sacrament, where we know not the meaning of the visible? Doth the Lord compare the Devil to a Lion; evil Judges to Bears; false Prophets to Wolves; secret and crafty persecutors to Foxes; open enemies in hostility to wilde Boars; Hereticks and false Preachers to Scorpions; good men to the Fowles of heaven, and Martyrs to Sheep, and yet we have no knowledge of the natures of Lions, Wolves, Bears, Foxes, wilde Boars, or Scorpions? Surely when *Solomon* saith to the sluggard, Go to the Pismire, he willet him to learn the nature of the Pismire, and then according thereto reform his manners: And so all the World are bid to learn the natures of all Beasts, for there is alway something to be learned in them, according to this saying of St. *Basil*, *A deo nihil non providum in natura rebus est, neque quicquam pertinentis ad securæ expertæ, & si ipsas animalium partes consideraveris, inveneris quod necque superfluum quid conditor opposuit, neque necessaria detraxit.* Then it being clear that every Beast is a natural Vision, which we ought to see and understand, for the more clear apprehension of the invisible Majesty of God, I will conclude that I have not omitted this part of the use of Beasts, but have collected, expressed, and declared, what the Writers of all ages have herein observed.

Now the third and last holy use that is made of Beasts in Scripture, is for Reproof and Instruction; so the Lord in *Job* 38, & 39. mentioneth the Lion, the Raven, the wilde Goats, the Hinds, the Hind Calves, the wilde Asses, the Unicorn, the Ostrich, the Stork, the pussant Horle, the Hawke, the Eagle, the Vulture, the Whale, and the Dragon; that is, the Fowles, Fishes, Serpents, and Four-footed Beasts: All which he reckoneth as known things to *Job*, and discourseth of as strange things in their natures as any we have inferred for truth in our History, as may appear to any man whatsoever, that will look studiously into them.

Shall

Shall I add hereunto how *Moses*, and all the Prophets, St. *John Baptist*, our most blessed Saviour, St. *Paul*, and all the Writers since his time (both ancient and later) have made profession of this part of Divinity; so that he was an unskilful Divine and not apt to teach, which could not at his fingers speak of these things: for (saith our Saviour) *If I tell you earthly things and ye believe not, how shall ye believe when I tell you heavenly things?*

*Solomon*, as it is witnessed in holy Scripture, wrote of Plants, of Birds, of Fishes, and Beasts, and even then when he stood in good favour with God, therefore it is an exercise of the highest Wisdom to travel in, and the Noblest minds study in: for in it as I will shew you (with your good patience, for I have no other Preface) there is both the knowledge of God and Man. If any man object, *Multa multi de musca, de apicula, de vermiculo, pauca de Deo*: I will answer with the words of *Theodorus Gaza*, *Pernulius enim ad Deo is tractat, qui doctrina rerum conditorum exquisitissima, conditorum ipsum declarat, neque musca, neque vermiculus omittendus est ubi de mira solertia agitur.* Whereunto St. *Austin* agreeth when he saith, *Majestatem divinam aque in formica membris atque magnamento transante fluvium.* And for the knowledge of man, many and most excellent rules for publick and private affaires, both for preserving a good conscience, and avoiding an evil danger, are gathered from Beasts: It were too long to run over all, let me (I beseech you) be bold to reckon a few which descend from Nature our common parent, and therefore are neither strained, counterfeited, inconsistent, or deceitful; but free, full of power to perswade, true, having the seal of the Highest for their evidence; constant and never altered in any age; faithful, such as have been tried at fire and touch-stone.

Were not this a good perswasion against murder, to see all Beasts fo to maintain their natures, that they kill not their own kind? Who is so unnatural and unthankful to his Parents, but by reading how the young *Storks* and *Wood-peckers* do in their parents old age feed and nourish them, will not repent, amend his folly, and be more natural? What man is so void of compassion, that hearing the bounty of the *Bone-breaker Bird* to the young *Eagles*, will not become more liberal? Where is there such a sluggard and drone, that considereth the labours, pains, and travels of the *Emmer*, little *Bee*, *Field-mouse*, *Squirrel*, and such other that will not learn for shame to be more industrious, and set his fingers to work? Why should any man living fall to do evil against his Conscience, or at the temptation of the Devil, seeing a Lion will never yeeld? *Mori fuit, vinci nescit*; and seeing the little *Wren* doth fight with an *Eagle*, contending for Sovereignty? Would it not make all men to reverence a good King set over them by God, seeing the *Bees* seek out their King if he lose himself, and by a most fragacious smelling sense, never cease till he be found out; and then bear him upon their bodies if he be not able to flie, but if he die they all forsake him? And what King is not invited to clemency, and dehorted from tyranny, seeing the King of *Bees* hath a sting, but never useth the same?

How great is the love & faithfulness of Dogs, the meekness of Elephants, the modesty or shamefastness of the adulterous Lionsess, the neatness and politture of the Cat and Peacock the justice of the Bee, which gathereth from all flowers that which serveth their turn, and yet destroyeth not the flower; the care of the Nightingale to make her voice pleasant, the chastity of a Turtle, the canonical voice and watchfulness of a Cock, and to conclude, the utility of a Sheep? All these and ten thousand more I could recite, to shew what the knowledge of the nature of brutish creatures doth work or teach the minds of men; but I will conclude this part with the words of S. *Jerom* against *Jovinian*. *Ad Herodem dicitur propter malitiam, Ite & dicite vulpi hinc, Ezech. 13. ad Scribas & Pharisæos genimine viperarum, Mat. 23. ad libidinosos equi himentes in proximorum feminas, Jer. 5. de voluptuose, Nolite mittere margaritas vestras ante porcos. De impudentibus, neque sanctum date canibus, Mat. 7. de infidelibus, Ephesi cum bestis pugnavi in similitudine hominum.* And thus far S. *Jerom*. Whereby we may boldly aver by way of induction, that wherein the knowledge of God, the knowledge of Man, the precepts of Virtue, the means to avoid evil are to be learned, that Science is Divine and ought of all men to be inquired and sought after: and such have I manifested in this History following.

Now again the necessity of this History is to be preferred before the *Chronicks* and Records of all ages made by Men, because the events and accidents of the time past, are peradventure such things as shall never again come in use; but this sheweth that *Chronicle* which was made by God himself, every living Beast being a word, every Kind being

being a sentence, and all of them together a large History, containing admirable knowledge and learning, which was, which is, which shall continue, (if not for ever) yet to the Worlds end.

*Et patri, & nostris, nonumque prematur in annum,  
Membranis intus positis delere licetbis  
Quod non eideris*

The second thing in this discourse which I have promised to affirm, is the truth of the History of Creatures, for the mark of a good Writer is to follow truth and not deceiverable Fables. And in this kind I have passed the straightest passage, because the relation of most things in this Book are taken out of Heathen writers, such as peradventure are many times superstitiously credulous, and have added of their own very many rash inventions, without reason, authority, or probability, as if they had been hired to sell such Fables. For, *Non bene conducti vendunt perjuria testes*. I would not have the Reader of these Histories to imagine that I have inserted or related all that ever is said of these Beasts, but only as much as is said by many, *For in the mouth of two or three witnesses standeth every word*: and if at any time I have set down a single Testimony, it was because the matter was clear and needeth not farther probation, or else I have laid it upon the Author with special words, not giving the Reader any warrant from me to believe it.

Besides, I have taken regard to imitate the best Writers, which was easie for me to do, because *Gesner* relateth every mans opinion (like a collection place or Dictionary, as he professeth) and if at any time he seemed obscure, I turned to the Books which I had at hand to gloss their meaning, putting in that which he had left out of many good Authors, and leaving out many magical devices. Now although I have used no small diligence or care in collecting those things which were most essential to every Beast, most true without exception, and most evident by the Testimony of many good Authors; yet I have delivered in this Treatise many strange and rare things, not as Fictions, but Miracles of nature, for wisemen to behold and observe to their singular comfort, if they love the power, glory, and praise of their maker, not withholding their consent to the things expressed, because they intreat of living things made by God himself. *Si ergo quarimus quid fecerit, Deus est: Si per quod, dixit, fiat, & facta sunt: Si quare fiat, quia bonum est. Nec enim auctor est excellentior Deo, nec ars efficacior Dei verbo, nec causa melior, quam ut bonum crearetur a Deo bono*; and this *Plato* said was the only cause of the worlds creation, *ut a Deo bono opera bona fierent*.

Now I do in a sort challenge a consent unto the probability of these things to wise and learned men, although no belief. For *Fides*, is *credere invisibilia*; but *consensus* is a cleaving or yielding to a relation until the manifestation of another truth; and when any man shall justly reprove any thing I have written for false and erroneous, I will not stick to release the Readers consent, but make satisfaction for usurpation. But for the rude and vulgar sort (who being utterly ignorant of the operation of Learning, do presently condemn all strange things with are not engraven in the palms of their own hands, or evident in their own herds and flocks) I care not, for my ears have heard some of them speak against the History of *Sampson*, where he tied fire-brands to the tails of Foxes, and many of them against the miracles of Christ. I may remember you (*R.W.*) of a Countrey tale of an old Masse-Priest in the daies of *Henry* the eight, who reading in *English* after the translation of the Bible, the miracles of the five Loaves and two Filhes, and when he came to the verse that reckoneth the number of the guests or eaters of the banquet, he paused a little, and at last said, they were about five hundred: The *Clark*, that was a little wiser, whispered into the Priests ears that it was *five thousand*, but the Priest turned back and replied with indignation, *Hold your peace sirrah, we shall never make them believe they were five hundred*.

Such Priests, such People, such persons I shall draw upon my back, and although I do not challenge a power of not erring, yet because I speak of the power of God, that is unimitable, I will be bold to aver that for truth in the Book of Creatures (although first observed by Heathen men) which is not contrary to the book of Scriptures.

Lastly, that it is the proper office of a Preacher or Divine to set forth these works of God, I think no wiseman will make question, for so did *Moses*, and *David*, and *Solomon*, and

and *Christ*, and *S. Paul*, and *S. John*, and *S. Trinitas*, *S. Gregory*, *S. Basil*, *S. Austin*, *S. Jerom*, *S. Bernard*, his narrations or Sermons upon the Canticles, and of latter daies *Isidore*, The Monks of *Messien*, *Geminianus*, and to conclude, that ornament of our time *Ferdinandus Zanchinus*. For how shall we be able to speak the whole Counsel of God unto his people, if we read unto them but one of his books, when he hath another in the world, which we never study past the title or outside; although the great God have made them an Epistle Dedicatory to the whole race of Mankind?

This is my endeavour and pains in this Book, that I might profit and delight the Reader, whereinto he may look on the Holiest daies, (not omitting prayer and the publick service of God) and passe away the Sabbaths in heavenly meditations upon earthly creatures. I have followed *D. Gesner* as near as I could, I do profess him my Author in most of my Stories, yet I have gathered up that which he let fall, and added many Pictures and Stories as may appear by Conference of both together. In the names of the Beasts, and the Physick I have not swarved from him at all. He was a Protestant Physician, (a rare thing to finde any Religion in a Physician) although *St. Luke* a Physician were a writer of the Gospell. His praises therefore shall remain, and all living Creatures shall witness for him at the last day. This my labor whatsoever it be, I consecrate to the benefit of all our *English* Nation under your Name and Patronage, a publick Professor, a learned and reverend Divine, a famous Preacher, observed in Court and Countrey; if you will vouchsafe to allow of my Labors, I stand not upon others, and if it have your commendation, it shall encourage me to proceed to the residue, wherein I fear no impediment but ability to carry out the charge, my care so standing that I have not any access of maintenance, but by voluntary benevolence for perillous pains, receiving no more but a laborious wages, and but for you, that had also been taken from me: Therefore I conclude with the words of *St. Gregory* to *Leontius*, *Et nos bona qua de vobis multipliciter predicantur addiscentes, assidue pro gloria vestra inculcatis omnipotentem valeamus Dominum deprecari*.

Your Chaplain in the Church of

*St. Bonolph Aldersgate,*

*Edward Toppel:*

An Alphabetical Table of all the Creatures described in this First Volum.

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# THE HISTORY OF Four-Footed Beasts.

THE ANTALOPHE.



HE Antelope called in Latin *Caprus*, and of the Grecians *Antelopos*, or *Apitolos*: of this beast there is no mention made among the Ancient Writers, except *Swidan*, and the Epistle of *Alexander* to *Aristotle*, interpreted by *Cornelius Nepotus*. They are bred in *India* and *Syria*, near the River *Euphrates*, and delight much to drink of the cold water thereof: Their body is like the body of a *Roe*, and they have horns growing forth of the crown of their head, which are very long and sharp; so that *Alexander* affirmed they pierced through the shields of his Souldiers, and fought with them very irefully: at which time his company slew as he travelled to *India*, eight thousand five hundred and fifty; which great slaughter may be the occasion why they are so rare, and seldom seen to this day, because thereby the breeders and means of their continuance (which consisted in their multitude) were weakened and destroyed. Their horns are great and made like a saw, and they with them can cut asunder the branches of Olier or small trees, whereby it cometh to passe that many times their necks are taken in the twists of the falling boughs, whereat the Beast with repining cry, bewrayeth himself to the Hunters, and so is taken. The virtues of this Beast is unknown, and therefore *Swidan* saith, an *Antelope* is but good in part.



A detailed black and white woodcut illustration of a monkey, likely a species of Old World monkey, sitting and looking towards the right. The monkey has a large head, a long tail curled on the ground, and is holding a small object in its right hand near its face. The illustration is signed 'J. G. S. 1850' on the left side.

### • n History.

The anatomy  
of Ares.

Ape

B

Apes, and being tamed and taught, they conceive and work very admirable feats, and their skins pulled off them being dead are dressed for garments. The foolish *Arabians* dedicated *Memnonius* cecropius unto heaven, and in all afflictions implored his aid. There is one other kind of Monkeys, whose tail is only hairy at the tip, called *Cercopithecus*.

The *CEPHUS*, or *Martine Monkey*.

The names.

Diodorus  
Siculus.

The *Martin* called *Cepus* of the Greek word, *Kepus*, which *Aristotle* writeth *Kebus*, and some translate *Cebus*, some *Cephus* or *Cephus* or more barbarously *Celphus*, the Latines sometimes *Orum*, for indeed this kind of Ape in his best estate is like a garden set with divers flowers, and therefore the best kind of them is discerned and known by the sweetest flavour, such being always the most ingenious imitators of men. It is very probable that this name *Cepus* is derived of the Hebrew *Koph* and *Kophin* signifying Apes in general, as is before said, but yet this kind is distinguished from other by *Strabo*, *Eliauus* and *Pliny*, although *Aristotle* doth make no difference betwixt this and another ordinary Monkey.

Pliny.  
The first  
knowledge of  
Mutines.Their Com-  
munity of breed,  
*Strabo*.Their an-  
atomy.  
*Strabo*.  
*Staliger*.

Their colour.

Eliauus.

Cay.

Their dispo-  
sition.

long tail, the which such of them as have tasted flesh will eat from their own bodies. Concerning their colour, howsoever they are not all alike, for some are black with white spots, having a greater voice than others, some yellow, some Lion-tawny, some golden-yellow, and some coal-black: yet for the most part, the head and back parts to the tail, are of a fiery colour, with some golden hair aspered among the residue, a white snow, and certain golden strokes like a collar going about the neck, the inferior parts of the neck down to the breast, and the forefeet are white, their two dugs as big as a mans hand can gripe, are of a blewish colour, and their belly white, their hinder legs black, and the shape of their snout like a *Cynocephalus*: which may be the difference betwixt *Eliauus* and *Strabo* their *Cepus*, and *Aristotle* *Cebus*, for nature many times bringeth forth like beasts which are not of the same kind. In England there was a *Martine* that had his back and sides of a green colour, having here and there white hair, the belly, chin and beard (which was round) white, the face and shins black, and the nose white, being of the lesser kind, for in bigness it exceeded not a Coney. Some of them in *Aethiopia* have a face like a Satyre, and other members in part resembling a Bear, and in part a Dog, so are the *Prasian* Apes. This *Martine* did the *Babylonians*, inhabiting neer *Momphe*, for the strangeness, the colour, and shape thereof, worship for a God. They are of evil disposition like Apes, and therefore we will spare both their pictures and further description, finding very little of them in Histories worth commemoration.

The

The Ape *CALITRICH*.Of the *Prasian* Apes.

The *Calitrich*, so called by reason of his beard, and may be termed in English a bearded Ape, will live no other where then in *Ethiopia* and *India*, which are casie to take, but very hard to bring away alive into these Countries. They differ in appearance from all other Apes, having a long beard and a large tail, hairy at the end, being in *India* all white, which the *Indians* hunt with darts, and being tamed, they are so apt to play, that a man would think they were created for no other purpose; whereupon the *Grecians* use in proverb, an Ape having a beard, for a ridiculous and foolish jesting man.

The name.

Pliny.

Country of  
Ethiopia.

Their parts

and colour.

Albertus.

Erasmus.

*Megasthenes* (saith *Eliauus* and *Strabo*) writeth of Apes in *Prasia* a Region in *India*, which are no lesse then great Dogs, and five cubits high, having hair like a Man coming forth of their forehead and beards, being altogether white except their tails, which are two cubits and a half long, very like a Lions; and unto a simple man it might seem, that their tufts of hair were artificially trimmed, though it grow naturally. Their beard is much like a Satyres, and although their body be white, yet is their head and tip of their tail yellow, so that the *Martins* before mentioned, seem to be affianced to these. These *Prasian* Apes live in Mountains and Woods, and yet are they not wilde, but so tame that oftentimes in great multitudes they come down to the Gates and Suburbs of *Lagery*, where the King commandeth them dayly foddren Rice for their food, which they eat, and being filled return again to their home and usuall places of harbour in great moderation, doing no harme to any thing.

Eliauus.

Place of their  
abode.

Their food.

Peter

L. 4. c. 10.  
D. 10. 3.

Peter Martyr telleth this story of one of these, that he being like to a great Munkey, but having a longer tail, by rowling over and over three or four times together taketh such strength, that he leapech from bough to bough, and tree to tree, as if he flew. An archer of that Sea-voyage hurt one of them with an arrow, the wounded beast presently leapech to the ground, and setteth upon the archer, as fiercely as a mad Dog; he drew his sword and struck off one of his armes, and so at last with much ado took the maimed beast, who being brought to the Navy, and accustomed to the society of men, began by little and little to waxe tame.

Peter Martyr.

The hatred of  
these Apes.

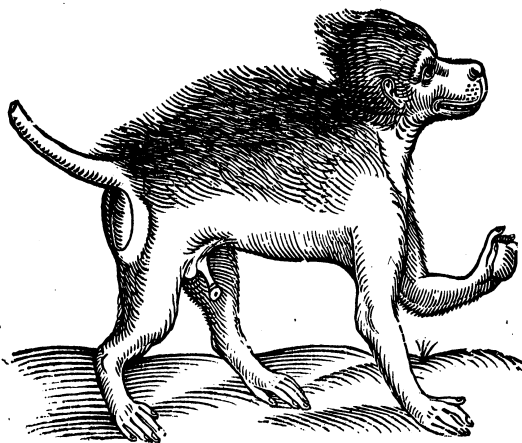
While he was in the ship bound with chains, other of the company having been on land to forrage, brought out of the Marshes a Bore, which Bore was shewed to the Munkey; at the first sight either of other set up their bristles, the raging Munkey leapech upon the Bore, and windeth his tail round about the Bore, and with the one arme which he had left, caught him, and held him so fast by the throat, that he suffred him.

There is another kind of Munkey, for stature, bigneffe and shape like a Man, for by his knees, secret parts and face, you would judge him a wilde man, such as inhabit *Namidia*, and the *Laponia*, for he is altogether overgrown with hair; no creature, except a man can stand so long as he; he loveth women and children dearly, like other of his own kind, and is so venerated that he will attempt to ravish women, whose Image is here described, as it was taken forth of the book of the description of the Holy Land.

His love.



Of the *CYNOCEPALE* of *BABOUN*.



Aristotle.  
Pliny.  
Dionysius.  
Aristianus.  
Prestor. John  
ad Rom pont.

*Cynocephales*, are a kind of Apes, whose heads are like Dogs, and their other parts like a mans; wherefore *Gaza* translateth them *Canticipites*, (to wit) dog-heads. In the *French*, *German*, and *Ulyrian* tongues, they are called of some *Babion*, and *Babain* in *Italian*, is a small kind of Ape; but *Aristotle* saith, that a *Cynocephale* is bigger than an Ape. In *English* they are called *Baboun*.

There are many kinds of *Babouns*, whereof some are much given to fishing, so that they will tarry a whole day in the deep hunting for fish, and at length come forth with a great multitude. Again, there are some which abhor fishes, (as *Orus* saith) which kind the *Egyptians* Emblematically use to paint

paint, when they will decipher a sacrifice. Some there are which are able to write, and naturally to discern letters; which kind the old *Egyptian* Priests bring into their Temples, and at their first entrance the Priest bringeth him a writing Table, a pencil and inke, that so by seeing him write, he may make tryall whether he be of the right kind, and the beast quickly sheweth his skill: wherefore in ancient time, they were dedicated to *Mercury*, the fained god of learning.

The reason why the *Egyptians* do nourish them among their hallowed things is, that by them they may know the time of the conjunction betwixt the Sun and Moon; because the nature of this beast is, to have a kind of feeling of that conjunction, for after that these two signs meet, the male *Baboun* neither will look up nor stirre from the ground, as it were lamenting the ravishment of the Moon with disdainful conceits; in the manner the female, who moreover, at that time sendeth forth bloud out of her womb, whereupon the *Egyptians* signifie by a *Baboun* the Moon, the rising of the Moon, and the bloud which he holdeth his hands up toward heaven, and wearing a crown, or his head, and his usual gestures, doth that Beast congratulate her first appearance.

Another cause why they bring them into their Temples is, because of the holynesse of circumcision, for it is said true (though errant) that they are brought forth circumcised, at the least while in some appearance, wherefore the Priests give great heed to accomplish and finish the work begun. The *Egyptians* also paint a *Baboun* to signifie the *Equinotium*, for in every *Equinotium* they also upon their *Egyptian* Temples have grave a *Baboun*, out of whose yard or privy parr issued forth water; and they also say that this beast so nourished among their holy things, dyeth not at once like other beasts, but every day dyeth part by the space of 72 days (the other parts remaining in perfection of nature) which the Priests take and put in the earth day by day, till all perith and be consumed.

The West region of *Africa* and *Æthiopia* have great store of *Cynocephals*, *Babouns*, and *Acephals*, beasts without a head, whose eyes appear with in their breasts. In like sort in *Arabia*, from *Dira* Southward in the country, there are many *Babouns*, and in the Continent called *Dachinobades* beyond *Baryaza*, and the Eastern Mountains of the *Indi* region; and those which *Apollonius* saw bewixt the *Hyndus*, and *Arabia*, seem to be of this sort, in that he describeth them to be black haired, Dog-faced, and like little men; wherewithall *Æthanas* seemeth to be deceived, in saying, that there are men *Cynocephalos*, Dog-faced, whereas it is the error of vulgar people, to think that *Babouns* are men, differing only in the face of visage.

Concerning their members or parts in severall, they are black and hairy, rough skinned, red and bright eyes, a long Dogs face, and teeth stronger and longer then Dogs: the face of a Lion must not be attributed to this beast, nor yet a Satyres, though it be more like. It hath a grim and fearful face, and the female hath naturally her womb cast out of her body, and so she beareth it about all her life long: their voice is a shrill whizing, for they cannot speak, and yet they understand the *Indian* language; under their beard they have a chin growing like a Serpents, and bearding about the lips like a Dragon; their hands are armed with most strong nails, and sharp; they are very swift of foot, and hard to be taken, wherefore they will run to the waters when they are hunted, being not ignorant that among waters they are most hardly taken; they are very fierce and active in leaping, biting deep and eagerly where they lay hold, neither do they ever grow so tame, but that they remain furious also. They love and nourish sheep and Goats, and drink their milk; they know how to take the kernels out of Almonds, Walnuts and Nuts, as well as men, finding the meat within, though the shell be unprofitable: they will also drink wine and eat flesh, sod, roasted, or deliciously dressed, and they will eat Venison, which they by reason of their swiftness take easily, and having taken it tear it in pieces and roast it in the Sun; they can swim safely over any waters, and therefore among the *Egyptians* they signifie swimming.

They are evil mannered and natured, wherefore also they are pictured to signifie wrath, they are so unappeasable. The Latins use them adjectively to signifie any angry, stubborn, froward, or raving man. They will imitate all humane actions, loving wonderfully to wear garments, and of their own accord they clothe themselves in the skins of wilde beasts they have killed, they are as lustful and venerateous as Goats, attempting to defile all sorts of women, and yet they love little children, and their females will suffer them to suck their breasts if they be held to them, and some say they will suck womens breasts like little children. There was such a beast brought to the French King, his head being like a Dogs, and his other parts like a mans, having legs, hands and armes naked like a mans, and a white neck; he did eat sod flesh so mannerly and modestly, taking his meat in his hands, and putting it to his mouth, that any man would think he had understood humane conditions; he stood upright like a man, and sat down like a man. He discerned men and women asunder, and above all loved the company of women, and young maidens; his genital member was greater, then might match the quantity of his other parts: he being moved to wrath, would rage and set upon men, but being pacified, behaved himself as meekly and gently as a man, and was overcome with fair words: shewing himself well pleased with those that sported with him. The *Nomades* people of *Æthiopia*, and the Nations of *Menimur*, live upon the milk of *Cynocephales*, keeping great herds of them, and killing all the males, except some few preserved for procreation.

The Indian  
kind of Baboun.

Orus.

A secret in  
their nature.

Circumcision  
natural in Ba-  
bouns.

Orus.

Another secret.

A wonder.  
Orus.

Herdotus.  
The Country  
of their abode  
and breed.

St. Ido.

Aristianus.

Their anat-  
omy and parts  
in particular.  
Albertus.

Their voice.  
Æthanas.

Their love and  
food.

Their activity  
in swimming.

Their nature  
in particular.

Their love of  
garments.

An History.  
lib. de natura  
rerum.

## A TARTARINE.

*Theod. Beza.*

**T**Here was at *Paris* another beast called a *Tartarine*, and in some places a *Magot* (much like a *Baboon*, as appeareth by his natural circumscription) being as great as a *Gray-hound*, and walketh for the most part upon two legs, being clothed with a *Souldiers* coat, and a sword girded to his side, so that the most part thought him to be some *Monster-little-man*, for being commanded to his kennel, he would go and tarry there all night; and in the day time walk abroad to be seen of every man, it was doubtful whether he were of the *Monkey* kind or the *Baboon*, his voice was like the squeaking of a *Mouse*, but his aspect and countenance was fierce, truculent and fearful, as his image is here deciphered.



The SATYRE.

**Superstitious  
error of Sa-  
tyres.**

**Their name.**

**A**S the *Cynocephal* or *Baboon* Apes have given occasion to some to imagine (though falsely) there were such men, so the Satyres a more rare and seldom seen beast, hath occasioned other to think it was a Devil; and the Poets with their Apes, the Painters, Limmers, and Carvers, to create that superstition, have therefore described him with horns on his head, and feet like Goats, whereas Satyres have neither of both. And it may be that Devils have at some time appeared to men in this likeness, as they have done in the likeness of the *Oncelians* and wild Asse, and other shapes; it being also probable, that Devils take not any denomination or shape from Satyres; but rather the Apes themselves from Devils whom they resemble, for there are many things common to the Apes and Devilish-Satyres, as their humane shape; their abode in solitary places, their rough hair, and lust to women, wherewithall other Apes are naturally inclined: but especially Satyres. Wherefore the Ancient Grecians conjecture their name to be derived as it were of *Staber*, signifying the yard or virile member: and it is certain that the Devils have exercised their preposterous lust, or rather their imagination of lust upon mankind, whereof of cometh that distinction of *Fami*, that some are *Incubi* defilers of Women, and some *Succubi* defiled by men. Peradventure the name of Satyre is more fitly derived from the Hebrew *Sar*, as filed by men. Peradventure the name of Satyre is more fitly derived from the Hebrew *Sar*, as filed by men. Peradventure the pluralis *Scirim*, Isa. 13. which is interpreted monsters of the Desert, or rough hairy creatures, and when *issim* is put to *seir*, it signifieth Goats.

The Chaldeans for *Serim*, render *Schedin*; and the Arabians, *Lesefathin*; that is, *Satan*; the Persians, *Devan*; the Ethiopians, *Devadai* and *Dewan*; the Germans, *Tusfel*. They which passed through the world and exercised dauncing and other sports, for *Dionysius*, were called *Satyræ* and sometimes *Tyrii*, because of their wanton songs; sometimes *Sileni* (although the difference is, that the smaller and younger beaſts are called *Satyræ*, the elder and greater *Sileni*;) Also *Bacche* is, that the ſmaller and younger beaſts are called *Satyræ*, the elder and greater *Sileni*;) Also *Bacche* and *Nympha*, whereof *Bacchus* is pictured riding in a Chariot of Vinebranches, *Sileni* riding beſide him on an Aſſe, and the *Bacche* or *Satyræ* ſhaking together their ſtalkie Javelines and Palmbars. By reaſon of their leaping they are called *Scitæ*, and the antick or *Satyrical* dauncing *Silimir*, and they ſometimes *Silennius*; ſometimes *Ægipæ*: wherefore *Pliny* reporteth, that among the Weſtern *Ethiopiæ*, there are certain little hills of the *Satyrilique Ægipæ*, and that in the night time they uſe great fires, piping and dauncing, with a wonderful noiſe of Timbrels and Cymbals: and ſo alſo in *Atlas* among the *Morres*, whereof there was no footing, remnant, or appearance to be found in the day time.

# The

The *Satyrs* are in the Islands *Satyria*, which are three in number, standing right over against *India* on the farther side of *Ganges*; of which *Euphemus* *Gargareus* has researched this History. That when he failed into *Italy*, by the rage of wind and evil weather, they were driven to a Coast unnavigable, where were many desert Islands inhabited of wilde men, and the Mariners refused to land upon some Islands, having heretofore had trial of the inhumane and uncivil behaviour of the inhabitants; so that they brought us to the *Satyrian Islands*, where we saw the inhabitants red, and had tails joyned to their back, nor much less then horses. These being perceived by the Mariners, a

**Ptol. 2,7.**  
Countreys of  
biced.

run to the Ships and lay hold on the women that were in them, the Ship-men for fear took one of the Barbarian women and set her on the shore among them, whom in most odious and filthy manner they abused, not only in that part that nature hath ordained, but over the whole body most libidiously, whereby they found them to be very brute beasts.

Their lustful disposition.

Their lustful  
disposition,

There are also *Satyres* in the Eastern mountains of *India*, in the Country of the *Cattaduli*, and in the Province of the *Comari* and *Caruda*, but the *Cebi* (spoken of before bred in *Ethiopia*, are not *Satyres* (though faced like them;) nor the *Præjan* Apes, which resemble *Satyres* in short beards. There are many kinds of these *Satyres* better distinguished by names than any properties natural known unto us. Such are the *Ægipane* before declared, *Nymphs* of the Poets, *Fawnes*, *Fan*, & *Sileni*, which in the time of the Gentiles were worshipped for gods; and it was one part of their Religion, to set up the picture of a *Satyr* at their doors and gates, for a remedy against

and the statue of *Priapus* in the *Academy* of a Satyr in their Gardens: for which cause we read of many pictures made of Satyres. *Antiphalus* made a very noble one in a *Zembris* skin, calling it *Apocyon*, that is, *Wry-faced*. Another Painter of *Aristides*, painted it crowned with drinking cup, signifying thereby the beastliness of drunkards. *Miron* had one painted hearing and admiring pipes, and another called *Periboristai* at *Athens* as is reported, & that *Praxiteles* was wonderfully in love therewith; whereupon being at supper with *Phryne* the noble harlot, who had begged of him the best piece of work he had, contented with this condition, that he would not tell her which he loved best; whereupon she to satisfy herself, privately suborned one of his slaves, to come in at supper time, and tell him his house and most of his goods were burned; whereat being amazed, demanded if *Cupid* and the *Satyr* were safe; by which he knew the best piece, and asked *Cupid*, refusing the *Satyr*. *Protagoras* had one painted holding pipes in his hand, and was called *Anapompeus*; & *Timon* had painted *Cyclops* sleeping in a little barrel, with Satyrs standing beside him, measuring with a javelin the length of his thumb. Satyres have to humane conditions in them, nor other resemblance of men beside their outward shape: though some speak of them like as of men. They carry their meat under their chin as in a storehouse, and from thence being hungry they take it forth to eat, making it ordinary with them every day which is but annual in the *Fernice* Lions; being of very unequal motions above other Apes. They are hardly taken, except sick, great with young, old, or asleep; for *Sylla* had a Satyr brought him which was taken asleep near *Apollonia*, in the holy place *Nymphæum*, of whom he (by divers interpreters) demanded many questions, but received no answer. Sawe only a voice much like the neighing of a horse, whereof he being afraid, sent him away alone. *Philobrotus* telleth another history, how that *Apollonius* and his colleagues supping in a village of *Ethiopia*, beyond the falls of *Nilus*, they heard a sudden outcry of women calling to one another; some saying, *Take him*, others, *Follow him*; likewise provoking their husbands to help them: the men presently took clubs, stones, or what came first to hand, complaining of an injury done unto their wives. Now some ten months before there had appeared a fearful show of a Satyr, raging upon their women, and had slain two of them, with whom he was in love: the companions of *Apollonius* quaked at the hearing hereof, and *Nilus*

*Mela.*  
 Resemblance  
 of Satyres.  
 Their provi-  
 sion of food.  
 Their taking.

one of them (ware by *Jove*) that they being naked and unarmed, could not be able to resist him in his outrageous lust, but that he would accomplish his wantonness as before: yet said *Apollonius*, there is a remedy to quell these wanton leaping beasts, which men say *Midus* used (for *Midus* was of kindred to Satyres, as appeared by his ears.) This *Midus* heard his mother say, that Satyres loved to be drunk with wine, and then sleep soundly, and after that be so moderate, mild and gentle, that a man would think they had lost their first nature.

Whereupon he put wine into a fountain near the high-way, whereof when the Satyre had tasted he waxed meek suddenly, and was overcome. Now, that we think not this a fable (saith *Apollonius*) let us go to the governor of the Town, and inquire of him whether there be any wine to be had that we may offer it to the Satyre: whereunto all consented, and they filled four great Egyptian earthen vessels with wine, and put it into the fountain where their cattle were watered; this done, *Apollonius* called the Satyre, secretly threatening him, and the Satyre enraged with the savour of the wine came; after he had drunk thereof, Now said *Apollonius*, let us sacrifice to the Satyre, for he sleepeth, and so led the inhabitants to the dens of the *Nymphs*, distant a furlong from the Town, and shewed them the Satyre, saying, Neither beat, curse, or provoke him henceforth, and he shall never harme you. It is certain, that the Devils do many wayes delude men in the likeness of Satyres, for when the drunken feasts of *Bacchus* were yearly celebrated in *Parassus*, there were many sights of Satyres, and voices, and founding of Cymbals heard; yet is it likely that there are Men also like Satyres inhabiting in some desert places; for *S. Jerom* in the life of *Paul* the *Eremit*, reporteth there appeared to *S. Antony* an *Hippocentaur*, such as the Poets describe, and presently he saw in a rocky valley adjoining, a little man having crooked nostrils, horns growing out of his forehead, and the neather part of his body had Goats feet: the holy man not dismayed, taking the shield of Faith, and the breastplate of Righteousness, like a good Souldier of Christ, pressed toward him, which brought him some fruits of palms as pledges of his peace, upon which he fed in the journey; which *S. Antony* perceiving, he asked him who he was, and received this answer, I am a mortall creature, one of the inhabitants of this Desert, whom the Gentiles (deceived with error) do worship and call *Fauni*, Satyres, and *Incubi*: I am come in ambassage from our flock, intreating that thou wouldst pray for us unto the common GOD, who came to save the world; the which words were no sooner ended, but he ran away as fast as any fowl could flie. And lest this should seem false, under *Constantine* at *Alexandria*, there was such a man to be seen alive, and was a publick spectacle to all the World; the carcass whereof after his death was kept from corruption by heat, through salt, and was carried to *ANTIOCHIA*: that the Emperor himself might see it.

Satyres are very seldom seen, and taken with great difficulty, as is before said: for there were two of these found in the Woods of *Saxony* towards *Dacia*, in a Desert, the female whereof was killed by the darts of the hunters, and the biting Dogs, but the male was taken alive, being in the upper parts like a Man, and in the neather part like a Goat, but all hairy throughout: he was brought to be tame, and learned to go upright, and also to speak some words, but with a voice like a Goat, and without all reason: he was exceeding lustful to women, attempting to ravish many of what condition soever they were, and of this kind there are store in *Ethiopia*.



The

Taming of Satyres.

Paulenias. Macrolinus.

Men like Satyres.

Albertus. Two beasts like Satyres taken.

The figure of an *Apes* Monster.

The famous learned man *George Fabricius*, shewed me this shape of a monstrous beast (the figure whereof see p. 12.) that is to be joyned to the story of Satyres. There was (said he) in the Territory of the Bishop of *Salzburg*, in a forrest called *Fannenberg*, a certain four-footed beast, of a yellowish-carnation colour, but so wild that he would never be drawn to look upon any man, hiding himself in the darkest places, and being watched diligently, would not be provoked to come forth so much as to eat his meat, so that in a very short time it was famished. The hinder legs were much unlike the former, and also much longer. It was taken about the year of the Lord, One thousand five hundred thirty, whose image being here so lively described, may save us further labour in discoursing of his main and different parts and proportion.

Another monster like a Satyre.

Colour and nature.

## Of the Norwegian Monsters.

When as certain Ambassadors were sent from *James* the fourth of that name, King of *Scotland*, *Hell. Boet.* among whom was *James Ogil* that famous Scholar of the University of *Aberdeen*, they no sooner took shipping and hoisted sail, but there suddenly arose such a tempestuous storm, that they were driven to the coasts of *Norway*: and there going on shoar, they were very strangely affrighted, to see (as to them it appeared) certain wild, monstrous men, running on the tops of the mountains. Afterward they were told by the inhabitants that they were beasts (and not men) which did bear mortal hatred to mankind, although they could not abide the presence of a mans countenance, yet in dark nights, when the reverend village of humane creatures are covered, they will come down by troops upon the Villages, and except the barking of Dogs drive them back, they break open doors, and enter houses, killing and devouring whosoever they find; for their strength is so unrelittible and great, that they can pull up by the roots a tree of mean stature, and tearing the boughs from the body, with the flock or stem thereof they fight one with another. Which when the Ambassadors heard, they caused a sure watch to be kept all night, and withall made exceeding great fires, and when the light appeared, they took their farewell of those Monster-breeding-shores, recovering with joy, the course which before they had lost by tempest.

Monsters like Men.

Hated to mankind.

The great strength of these beasts.

Of the *ÆGOPITHECUS*.

Under the *Equinoctial* toward *Divers* ships of *Aps*. the East and South, there is a kind of Ape called *Ægopithecus*, an Ape like a Goat. For there are Apes like Bears, called *Arctopithecus*, and some like Lions, called *Leontopithecus*, and some like Dogs, called *Cynocphali*, as is before expressed; and many other which have a mixt resemblance of other creatures in their members.

Amongst the rest is there a beast called *Pan*, who in his head, face, horns, legs, and from the loins downwards resembleth a Goat; but in his belly, breast and armes, an Ape: such a one was *Niphoebus*, sent by the King of *Indians* to *Calistobius*, *Constantine*, which being shut up in a Cave or close place, by reason of the wildness thereof, lived there but a season, and when it was dead and bowelled, they pouldred it with spices, and carried it to be seen at *Constantinople*: the which having been seen of the ancient *Grecians*, were so amazed at the strangeness thereof, that they received it for a god, as they did a Satyre and other strange beasts.

The description of Pan.

Niphoebus.



## Of the SPHINX or SPHINX.

Pliny.  
Calphurnius.  
The description  
on.

Albanus.  
Councey of  
breed.

Lion-formice.  
Pliny.

Their nature.

Albertus.

Manner of car-  
rying their  
meat.

Of the name  
and notation  
thereof.  
\* Hermolant.  
\* Variants.

The Sphinx or Spinge is of the kind of Apes, having his body rough like Apes, but his head up to his neck, pils and smooth without hair: the face is very round yet sharp, and piked, having the breasts of women, and their favour or visage much like them: In that part of their body which is bare without hair, there is a certain red thing rising in a round circle like Millet seed, which giveth great grace and comeliness to their colour, which in the middle part is humane. Their voice is very like a mans but not articulate, founding as if one did speak hastily with indignation or sorrow. Their hair brown or fiery colour. They are bred in India and Ethiopia. In the Promontory of the farthest Arabia near Dira, are Spinges, and certain Lions called Formice, so likewise they are to be found amongst the Troglodytes. As the Baboons and Cynocephales are more wild than other Apes, so the Satyres and Spinges are more meek and gentle, for they are not so wilde that they will not be tamed, nor yet so tame but they will revenge their own harms: as appeared by that which was slain in a publick spectacle among the Thebans. They carry their meat in the storehouses of their own chaps or cheeks, taking it forth when they are hungry, and so eat it: not being like the Formice, for that which is annual in them, is dayly and hourly amongst these.

The name of this Sphinx is taken from a binding, as appeareth by the Greek notation, or else of delicacy and dainty nice: looseness, (wherefore there were certain common strumpets called Sphindia, and the Mægarian Sphindia, was a very popular phrase for notorious harlots) hath given occasion to the Poets, to saign a certain monster called Sphinx, which they say was thus derived. Hydra brought forth the Chymæra, Chymæra by Orithu the Sphinx, and the Nemean Lion: now this Orithu was one of the Geryon Dogs. This Sphinx they make a treble formed monster, a Maidens face, a Lions legs, and the wings of a Fowl: or as Ausonius and Varius say, the face and hand of a Maid, the body of a Dog, the wings of a Bird, the voice of a man, the claws of a Lion, and the tail of a Dragon: and that she kept continually in the Sphincian mountain; propounding to all travellers that came that way, an Enigma or Riddle, which was this, What was the creature that first of all, goeth on four legs; afterwards on two, and lastly on three: and all of them that could not dissolve that Riddle, the presently flew, by taking them and throwing them down headlong from the top of the Rock. At last Oedipus came that way and declared the secret, that it was a Man who in his infancy crept on all four, afterward in youth, goeth upright upon two legs, and last of all in old age, taketh unto him a staffe which maketh him to go as it were on three legs: which the monster hearing, the presently threw down her self from the former rock, and so the ended. Whereupon Oedipus is taken for a subtle and wise opener of mysteries.

Hesiod.  
Ausonius.  
The description  
of the Poets  
Sphinx.

The Riddle of  
the Sphinx.

The solution  
of the Riddle  
by Oedipus.

Palephatus.  
The true Hi-  
story of  
Sphinx.

But the truth is, that when Cadmus had married an Amazonian woman, called Spinx, and with her came to Thebes, and there slew Draco their King, and possessed his Kingdom; afterward there was a sister unto Draco called Harmonia, whom Cadmus married, Spinx being yet alive: She in revenge (being afflicted by many followers) departed with great store of wealth into the Mountain SPHINCUS, taking with her a great Dog which Cadmus held in great account, and there made daily incursions or spoils upon his people: Now Enigma in the Theban language, signifieth an inrode or warlike incursion, wherefore the people complained in this sort, This Grecian Sphinx rabbeth us, in setting upon with an Enigma, but no man knoweth after what manner she maketh this Enigma.

Cadmus hereupon made Proclamation, that he would give a very bountiful reward unto him that would kill Spinx, upon which occasion the CORINTHIAN Oedipus came unto her, being mounted on a swift Courser, and accompanied with some Thebans in the night season, slew her. Others say, that

Oedipus



Oedipus by countertesting friendship, slew her, making shew to be of her faction; and Panianus saith, that the former Riddle was not a Riddle, but an Oracle of Apollo, which Cadmus had received, whereby his posterity should be inheritors of the Theban Kingdom; and whereas Oedipus, being the Son of Laius a former King of that Country, was taught the Oracle in his sleep, he recovered the Kingdom usurped by Spinx his Sister, and afterward unknown, married his own Mother Jocasta. But the true moral of this Poetical fiction, is by that learned Valerius in one of his emblems deciphered, that her monstrous treble-formed-shape, signified her multifarious pleasure under a Virgins features, and her cruel pride under the Lions claws, her wilde-driven levity under the Eagles or Birds feathers, and I will conclude with the words of Suidas concerning such Monsters, that the Tritons, Spinges, and Centaurs, are the images of those things, which are not to be found within the compasse of the whole world.

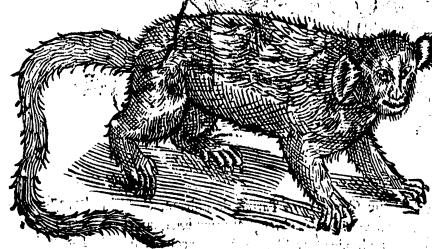
Suidas.  
Meaning this  
Poetical  
Sphinx.

The true Sphinx first described, is of a fierce though a tameable nature, and if a man do first of all perceive or discern these natural Spinges, before the beast discern or perceive the man, he shall be safe; but if the beast first discern the man, then is it mortal to the man. These Spinges were of great account for their strangeness: with their image did Augustus sign all his Grants, Labels, and Epistles: afterward he left that, and signed with the image of the Brithentes, had a fair house, about which there were Spinges and Gryllins wrought out of white stone. At Athens, in the Temple Parthenon, there is described the contention betwixt Pallas and Neptune, about the earth, and the image of Pallas made of Ivory and gold, hath in the mid of her shield the picture of a Sphinx. Amasis the King of Egypt, built in the porch of Pallas, an admirable work called Sai: where he placed such great Colossi and a dro-Sphinx, that it was afterward supposed he was buried therein, and was lively to be seen imputable. To conclude, the Egyptians in the porches of their Temples painted a Sphinx, whereby they insinuated that their divine wisdom was but dark and uncertain, and so covered with fables, that there scarce appeared in it any sparkles or footsteps of verity.

The nature of  
the Sphinx.  
Suetonius.  
The use of  
Sphinges.  
Herodotus.  
Panianus.

Herodotus.

## Of the SAGOIN, called GALEOPTHECHUS.



This figure of the Sagoin, I received of Peter Cordenberg, a very learned Apothecary at Antwerp, who is three times as big as my picture, and John Cey that famous English Doctor hath advertised me, that it no way resembles the Sagoin, which is not much greater then a Rat.

The quality  
of the  
Sagoin.  
Colour,  
Pars.

a little Conny, or a young Hedgehog; for he had seen several ones of that bigness, of a griseous colour, a neat beard, and somewhat ash-coloured, a tail like a Rat, but hairy, the feet of a Squirrel, and the face almost like a Martine, or Satyre, a round ear, but very short, and open, the hair black at the root, and white at the end, and in other conditions like a Munkie. They are much set by among women, and by the Brazilians where they are bred and called Sagoin, it being very probable that they are conceived by a small Ape and Weasell, for in that Country, by reason of the heat thereof, there are many such unnatural commixtions. It is a nimble, lively, and quick spirited beast, but fearful; it will eat white-bread, Apples, Sweet-grapes, dried in the Sun, Figs or Pears. There was one of them at Antwerp sold for fifty Crowns. In France they call a Sagoin, a little beast not much bigger then a Squirrel, and not able to endure any cold. Some other affirm that a Sagoin is a bearded creature, but without a tail, of an ash-colour, not much bigger then a fit; but of this beast there is not any author writeth more then is already rehearsed.

Procreation of  
Sagoin.  
Their meat.  
The price of a  
Sagoin.

## Of the Bear-Ape ARCTOPTHECHUS.

There is in America a very deformed beast which the inhabitants call Haut or Hanti, and Thucius the Frenchmen, Guenon, as big as a great African Monkey. His belly, hangeth very low, his head and face like unto a child, as may be seen by this lively picture; and being taken it will fight like a young child. His skin is of an ash-colour, and hairy, like a Bears he hath but three claws on a foot, as long as four fingers, and like the thornes of Privet, whereby he climeth up into the highest trees, and for the most part liveth of the leaves of a certain tree being of an exceeding height, which the Americans call Amahu, and thereof this beast is called.

Thucius.  
Of the name,  
His part.





- Abstrus.* not elsewhere; so are best Asse in those forenamed places. When they make choice of a Stallion, they look principally that he have a great head. An Asse is more desirous of copulation then an Horse, and both male and female do couple at thirty months, although it prove not untill three years, or three and a half. Men say that *Anna* the father in law of *Elau*, did first invent the copulation of Horses and Asse together; for as a Horse doth cover a Mare, so an Asse will cover a Mare, and an Asse will sooner fill the lust of a Mare then a Horse.
- Pliny.* If a Horse cover a female Asse which hath been entred by a male Asse, he cannot alter the seed of the Asse; but if an Asse cover a Mare which a Horse hath formerly entred, he will destroy the seed of the Horse, so that the Mare shall suffer abortion, by reason that the seed genital of an Asse is more frigid, then an Horses. The Mares of *Elu* cannot at all conceive by Asse's copulation, and there is more abortions falleth out by commixion of Horses with Asse, or Asse with Mares, then when every kind mingleth amongst themselves. It is but a superstition of *Boe*, which asseme that an Asse cannot conceive for so many years, as she hath eaten grains of *Baby*, once defiled with womens purgation; but this is certain, that if an Asse conceive not at the first falling of her teeth, she remaineth barren. They are not coupled in generation in the Spring *Equinoctium*, like Mares and other beasts; but in the Summer *Solstice*, by reason of their cold natures; that they may bring forth their young ones about the same time, for in the twelfth month after their copulation, they render their Foles. If the males be kept from labour they are the worse for generation, wherefore they are not to be suffered idel at that time; but it is not so with the female, the milk rest, that the Fole may be the stronger: but presently after the is covered, the milt be coured and driven to and fro, or else she will calt forth again the received seed.
- Pliny.* The time that the goeth with young, is according to the male kind by which she is covered, for so long as the male lay in the belly of his dam, so long will the Asse carry her young before deliverance: but in the figure of body, strength, and beauty, the young one takeeth more after the female then the male. The best kind of Asse are the Poles of a wild Asse and a tame female Asse. They lay when an Asse is foaled, to take it from the dam, and put it to suck a Mare, that it may be the greater, which is called *Hippotheca*, that is, a Horse suckling; and Mares will not be covered by Asse, except by such a one as was a horse suckling. As the Asse will engender till she be thirty years old, which is her whole life long, but if she conceive often, she will quickly be barren; whereof their keepers must take such care, that they caule them to be kept from often copulation.
- Pliny.* They will not hole in the sight of man, or in the light, begin in darkness; they bring forth but one time, for it hath not been heard of in the life of man, that an Asse hath ever brought forth twins. As soon as they are conceived they have milk in their udders, but some hold not untill the tenth month. They love their young ones very tenderly, for they will run through fire to come at them, but if there be any water betwixt them, it coolth their affections; for of all things they love not to wet their feet. They will drive their young ones from sucking at the sixth month, because of the pain in their udders, but their keepers wean them not till a whole year after their foaling. Their milk is so thick that it is used in stead of fodder: a Mares is more thin, and a Camels is thinnest of all. It is mortal to their young ones to talt the dams milk for two dayes after their foaling, for the food is so fat that it breedeth in their mouthe the *Colostracion* or *Beefling*.
- Pliny.* Touching their several parts, they have teeth on either chap like a Man and a Horse, an Asse and a Mule have 36 teeth, and joynd neer together: the blood of Asse and Bulls is the thickest of all other, as the blood of man is the thinnest: His head is great and his ears long and broad: both male and female lose their fore-teeth in the thirtieth month of their age, and the second to the first, in the six month; their third and fourth teeth are called *Gnumons*, that is, *Regulars*, because by them there is a tryed rule to know their age; and those teeth also they lose in the six month. The heart of an Asse is great, as all other fearful beasts have. The belly is uniform as in other beasts that have a solid or whole hoof. It wanteth a gall, and hath two udders betwixt the thighes, the foremost of the back neer the shoulder is weakest, and there appeareth the figure of a Crosse, and the hinder part neer the joins is stronger. The hoofs are whole and not parted: the *Syrian* water is so cold that nothing can hold it, except the hoof of an Asse or Mule; although *Alianus* affirme, that it cannot be contained but in the horns of *Seybian* Asse. Their tails are longer by one joint then a horses (though not so hairy). They are purged with monthly courses more then Sheep or Goats, and the urine of the female is more thin then the males. If an Asse was hindered by any disease from making water, certain superstitious persons for the ease of the beast, muttered this charm:
- Gallos bibi et non mibi, Myxau mibi et non bibi:* that is, The Cock drinketh and maketh not water, The Dormouse maketh water and never drinketh.
- Pliny.* They will eat Canes or Reeds, which to other beasts is almost poison: wherefore in the old time an Asse was dedicated to *Bacchus* as the Canes were sacred unto him: and at the time of their copulation they give them herb *Basill* to stir up their lust: They will be satisfied with any never so base food, as chaffe, whereof there is abundance in every Countrey, young thornes and fruits of trees, twigs of Olier, or a bundle of boughs to browse upon: in so much as *Q. Hortensius* was wont to say, that he had more care that his Barbels should not hunger in his fish-pools, then his Asse in his *Rosa*; but the young ones newly weaned must be more tendered, for they must be fed with hay, chaffe or Barley, green corn, or barley bran. Asse will hardly drink but at watering places in their folds, or such as they have been accustomed withall, and where they may drink without wetting their

their feet; and that which is more strange, they cannot be brought to go over hollow bridges, through which the water appeareth in the chinks of the planks; and when in travell they are very thirsty, they must be unladen and constrained to drink; yea, *Herodotus* reporteth, that there are certain Asse among the *African* shepherds, which never drink. When they sleep they lie at length, and in their sleep conceive many forceable dreams, as appeareth by their often beating back their hinder legs, which if they strike not against the vain aire but against some harder substance, they are for ever utterly lamed.

When the Asse of *Thracia* have eaten Hemlock, or an herb much like unto it, they sleep so long and strangely, that oftentimes the Countrey men begin to flea them, and on the suddain their skins fall tagen off, and the other half on, they awake, braying in such horrible manner, that the poor innkeepers most dreadfully affrighted therewith. Their voice is very rude and fearful, as the Poets say.

*Quiritat verres, tardat redit, uncat assellus.*

And therefore the *Grecians* to expresse the same, have devised many new words, and call it *Opheltimos*, *Erasphentus*, as the *Latin* writers; that is, to utter forth a voice in a bafe and rude manner. The Poets feign, that at that time when *Jupiter* came to war with the *Gyants*, *Bacchus* and *Vulcan*, the *Sayer* and *Silent* assisted and attended him, being carried upon Asse. When the time came that the battell began, the Asse for very fear brayed most horribly, whereat the *Gyants* not being acquainted with such strange and unknown voices and cries, took them to their heels and so were overcome.

In the sacrifice of the *Copidella Vacuna*, an Asse was feasted with bread, and crowned with flowers, hung with rich Jewels and *Byrettes*, because (as they say) when *Priapus* would have ravished *Vesta Ovid*, being asleep, she was suddenly awaked by the braying of an Asse, and so escaped that infamy. And the *Lampsceni* in the disgrace of *Priapus* did offer him an Asse. But this is accounted certain, that among the *Sythians* by reason of cold, an Asse is never heard or seen; and therefore when the *Sythians* set upon the *Persians*, their Horses will not abide the braying of Asse, wondering both at the strangeness of an Asse's shape and rudeness of his cry: wherefore there are certain birds, resembling in their chattering the braying of Asse, and are therefore termed *Onascelles*.

When an Asse dyeth, out of his body are ingendred certain Flies, called *Sorabeers*. They are infested with the same diseases that Horses be, and also cured by the same meanes (except in letting of blood) for by reason their veins be small and their bodies cold, in no case must any blood be taken from them.

Asse are subject to madness when they have tasted to certain herbs growing neer *Pontus*; as are *Vegetius* Bears, Horses, Leopards and Wolves: they only among all other hairy beasts are not troubled with either tikes or lice, but principally they perish by a swelling about the crown of their palterne, or by a *Cancer* called *Mala*, which falling down upon their liver they die, but if it purge out of their nostrils they shall be safe: and *Columella* writeth, that if sheep be stabled where Mules or Asse have been housed, they will incur the scab. There is great use made of the skins of Asse, for the *Germanes* do make thereof a substance to paint and write upon, which is called *Esfusum*. The *Arabians* have a cloth called *Maketh*, made of Asse and Goats hair, whereof the inhabitants of their delerts make them tents and beds. It is reported that *Empocheles* was called *Colyanemus*, because when the *Argentine* were troubled with winds by hanging about their City innumerable Asse skins, he safeguarded them from the winds: whereupon some have thought (but fallily) that there was some secret in Asse skins, against outrageous Tempestes.

The bones of Asse have been used for pipes, the Artificers made more reckoning of them then *Pliny* of the bones of Hares, and therefore *Elop* in *Plutarch* wondereth that so grosse and dull a creature should have such shrill and musical bones; and the *Byssitres* called the Philosophers *Naustratres*, because they played musick upon Asse bones, for they cannot abide the sound of a trumpet, because it resembleth the voice of an Asse, who is very hateful to them for *Tybons* sake.

*Meenus* allowed the flesh of young Asse to be eaten, preferring it before the flesh of wilde Asse, and this custome also prevailed at *Antioch*, where they did eat the flesh of old Asse, which heareth the *Romach*, having in it no good juice or sweetsels, and is very hard to be digested. In like sort about the coasts of *Alexandria*, men use to eat the flesh of Asse, which begetting in *Galina*, their body much melancholick and aduited humor, caueth them to fall into the *Elipmania* or spotted leprosie.

Asse are tamed at three years old, and taught for those businesses which they must be applied unto; some for the mill, some for husbandry and the plough, some for burthens and carriage, some for the wars, and some for draught. Merchants use Asse to carry their wine, oil, corn, and *Columella* other things to the sea-side; wherefore the Countrey man maketh principal account of this beast for his carriage to and fro, being fit to carry both on his neck and on his back: with them they go to market with their wares, and upon them bring home their household necessities.



*Diocorides.* cureth the Kings evil. The froath or scum of *Nitre* with the fat of an Asse or the fat of a Sow, cureth the bitings of Dogs; and if there be any scars in the body, the fat maketh them of the same colour with the residue of the body. And if one vexed with the Falling evil, be annoi-  
*R. affs.* ned with the suet or fat of an Asse, it will ease them very much; likewise the marrow of Asse  
*Pliny.* helpeth the Scabs from a man, and with the suet the places infected with Catarrhs, Leprosies, or Scars, receive their former colour; and the skin laid upon young Infants, maketh them without fear. And if the bill of a *Heron* wrapped in an Asse's skin, be bound to ones forehead, it provo-  
 keth sleep.

A Pallie man will fall down if he taste of the perfume made of the hairs of an Asse or Mule. The ashes of the hairs of Asse, stayeth bleeding; and the same hath the more force if they be of a male, and be mixed with Vinegar and laid in wool to the issue bleeding. The bones of an Asse broken and sod, are very sovereign against the venom of a Sea-hair-fish. The powder of an Asse's hoof drunk a moneth together, two spoonfuls at a time, helpeth the Falling evil very greatly: and the same mixed with oil, helpeth the Kings evil; and being put upon Kibes or Chil-blains, cureth them. The hoofs of Asse burned and beaten to powder, given to them that have the Falling evil in the drink, helpeth them speedily; also a burned hoof is mingled with many medicines, to cure the swelling of the Navel in children; and the hoofs perfumed procure speedy deliverance in travel of young, that the dead thing may come forth, otherwise it is not used, for it will kill the living young ones.

The dust thereof with the milk of an Asse, by annoiing cureth the Scars and Webs of the eyes, and as *Marcellus* saith, only the parings of an Asse's hoof scraped and mingled with a womans milk; and they say, that if an *Epileptic* man wear a ring made of an Asse's hoof wherein is no blackness, it will preserve him from falling. The powder of an Asse's hoof burned and beaten, laid in Vinegar and made in little bals, and one of them put into the mouth and there held, helpeth the looseness and pain in the teeth. There is a collection of certain hard matter about an Asse's legs, called *Lichen*, which if it be burned and beaten, and put into old oil, will cause hairs to grow out of baldness, and it is of such force, that if it be applied to a womans cheek, it will produce the same effect, and mingled with Vinegar it raiseth up the *Lethargic* man.

And if a man take the Ring-wormes growing naturally on Asse's legs, and shredding them into powder put them in Vinegar, it stayeth all pain in the head, which maketh one sleepey. The flesh of Asse's sod in portage helpeth them that have the *Pibisfy* or disease of the Lungs, and there are some which prescribe the taking of Asse's flesh, or the blood of Asse mingled with Vinegar, to be taken forty days together against the falling evil. The milk of an Asse mingled with honey and drunk, looseth the belly, and therefore *Hippocrates* gave it for a gentle purgation, being moisten then any other kind of milk, and fitter to take down the belly. It will also ease the tooth-ache, if the teeth be washed in it, and taken then that are loose, being very good to wash the teeth withal. *Galen* gave Asse's milk mixt with honey, to one in a Consumption when he came newly from a bath, and therefore it is given in Fevers *Hefticks*, and all consuming diseases, because the substance of it is fitter for detersion then nutriment: when the breasts are in pain, by drinking Asse's milk they be holpt; and the same mingled with honey, cureth Womens purgation; by drinking Asse's milk, an excruciate stomach is relieved: likewise all other pains in the stomach, which come of sadness or sorrow, sighing, and desperation; and *Heraclides* gave Asse's milk with Anniseed to one that had his lights stopped, and it is likewise commended against the Cough, extenuation, spitting of blood, Droptic, and hardness of the Spleen, but it is not good for a weak head troubled with giddiness or noise, yet will it loosen the hardness of the belly in a Fever.

It is also privately used against eating of Morture, White-lead, Sulphur, and Quicksilver; and when a mans meat doth not neither nourish nor digest, let him drink Asse's milk safely: and it is also good to gargarize in sore chaps or throats. Likewise in a Fever when there is no head-ache. The ancient in old time gave Asse's milk to children before meat, and for want thereof Goats milk; for sore mouthes it must be gargarized. It is very profitable against the Colick and Bloody-flux, if honey be put thereto; looseness or desire of stool is taken away by drinking Asse's milk; the whey or milk of an Asse did *Hippocrates* prescribe against the Consumption of the reins or back; and the same with the root of a pomegranat against the looseness and other diseases of the belly to be drinke.

Also there are examples where the whey of Asse's milk have helped the Gowt, both in hand and foot: sweet water with Asse's milk is wholesome against poison of Hen-bane, and other poisons, but it must be used new, or else soon after warmed: This milk will make womens skins whiter; wherefore *Poppa*, the wife of *Dimitius Nero* carried about with her in her progress fifty milch Asse's, wherewith she did use to bath her self.

The Urine with the own dung, healeth straight shoing, scabs in a man, and the roughness of the nails. It taketh away the curst of Oxen. It is given in drinke, to cure them that have ache in their reins, and with *Piper-wort* it is profitable against Suppurations and Apoplems in the flesh. If any be hurt by the Stars, wash them in Asse's tale, mingled with *Splenard*: the same force hath it against cornes and all hardness or thickness of skin. The dung of Asse's new with oil of *Roses*, distilled warme into the ears, helpeth deafness; and pusses or suddain boils of the head, are cured with the juice of Asse's dung, and of Sea-onions beat to powder, and the fat of beef, layed to the boils like a plaister: both the dung of Asse and Horses either raw or burnt mingled with Vinegar, restraineth bleeding both in Fluxes and Wounds, used like a plaister, being new and mingled with Vinegar; and  
 for

*Diocorides.**Galen.**Pliny.**Marcellus.**Diocorides.*

for the bleeding at the nose, snuffe in the ashes of Asse's dung burnt to powder. The dung of Asse cureth the Piles, and the same dried and moistened in wine being drunk of Cattel which are stung with Scorpions, cureth them if it be at grass; and it is found true by long experience, that the dung of an Asse rubbed in quantity two spoonfuls, and taken every day, delivereth one from the falling evil.

*mittis prodest ex ubere succus asselle,  
 Si tepido vino infundus ac mella piperque.*

This is good against the gall and running over thereof, if it be mingled with warm wine, pepper, and hony. The *Syrians* call the dung of a young Fole which it first casteth up after the faling, *Poleon*; and give it against the sickness of the milke.

*In fida delectum solo melle piper prodest.*

The same is good against the Colick and the Bloody-flux. The juice of Asse's dung, Asse's milk, and sweet wine, anointed on the sick member, cureth the Gowt: and the same stayeth the flowres of women with child; the juice hereof cureth the closing up of the eyes in the night. The skin wherein the young Fole lyeth in the dam's belly being melted unto by him that hath the Falling evil, it easeth him. *Andalusians* hath reported, that if the excrements of a Mares copulation be burned, there will appear monstrous shapes of Horses heads. If a Horse have a web in his eye, mingle together the milk of an Asse, the blood of a Dove, and the dew of Cabages, and anoint him therewith: and there be some which take of the dirt where an Asse hath made water in the way, and therewith anoint the Scabs of Sheep for their recovery: but when one is stricken with a Scorpion, the Asse's dung must be presently applyed, or else it profiteth nothing in that malady.

Of the *Hinnus*, *Innus*, and *Ginnus*, *Mannus*, *mannulus*, *Bess* & *Burdones*, &c.

There is no language besides the *Greek* that have any words to express these Beasts, and the *Latins* have derived these termes from them. These are beasts of a small size, as dwarves among men, and therefore seldom seen in these parts of the world. They which are called *Hinni*, are conceived of a Horse, and a female Asse, who although they take their denomination from the male, yet do they more resemble the female. In ancient time, the males which were conceived of a Horse and a female Asse, were called *Hinnuli*, and likewise of an Asse and a Mare, *Muli*; so are the young ones of little Goats, Deer, Hares, and other like: although some take *Innuli* for the young Harts, and the *Hinni* and *Hinnuli* for the breed of a Horse and an Asse; so that there appeareth two kinds, and both of them transplanted out of other.

The *Hinnus* is lesse then the Mule, but more ruddy, having ears like a Horse, and a mane and tail like an Asse, lying in the womb before the faling twelve moneths like a Horse, and are brought up like little Horses, whose age is discerned by their teeth, and they are sometimes procreated of a Horse and a Mule, and because of their aptness to beare, they are called *Burdones*, or else of *Bardus* by reason of their folly and slowness.

*Manni* and *Mannuli* are very little low horses, being very gentle and easie to be handled, being called also among the *Civilians*, *Burdi*. There is in *France*, not far from *Gratienopolis*, a kind of Mule which in the Country speech are called *Jumar*, being bred of an Asse and a Bull, and in the *Helvetian* Alpes beyond *Curia*, about the Town *Spluga*, I have been sincerely informed, that there was a Horse conceived of a Bull and a Mare, and therefore *Scaliger* saith, that such a foal is called *Hinnulus*, whereof he reporteth he had seen many, and he himself had two of them, and at that instant had only one female, betwixt whose ears there were two bony bunches about the bigness of half a Walnut, giving evident testimony by the forehead, that her father or Syre was a Bull: and some say that this kind want their upper teeth: and their underchap doth in a deformed manner stretch forth it self beyond the upper, as it is in many fishes, being called of the *Gabala* and *Averni*, *Bess*: And at this day there is in the Court of *France* a certain beak which in the former part is like an Asse, and in the hinder a Sheep. In *Ferraria* among other strange beasts, they nourish dwarfish Asse's, of whom *Mari-J* made a *Difficodon* to this effect, that they are not so high as a man, when he sitteth on the ground.

*Hic tibi de mulis non est metuenda ruina:  
 Altilis in terris pene sedere joles.*

For the *Innus*, and *Ginnus*, or *Hinnus*, they are conceived by a Mule and a Mare, which are very small by reason of some disease the dam that beareth them hath in her belly: the word *Inn* signifying a young or new born Nephew, and is attributed to this kind of beasts, because they never exceed the quantity of a young foal. Both the Mule and the Burdo remain barren and never conceive, these neigh like a Horse, and that brayeth like an Asse. A *Musimon* is a short Horse, Asse, or Mule.

## Of the Wild Asse.

A Wild Asse, called of the Latins, *Onager*; of the Hebrews, *Arod* and *Ere*, and as *Sebastian Munster* affirmeth, *Neroda* and *Arda*; in the German tongue it may be termed *Ein Waldsehl*, and the young ones are called *Ladilioni*.

Martial.

*Dum tener est Onager, solaque lalisfo matre  
Pascitur: hoc infans, sed breve women habet.*

Country of  
breed.

These wild Asses are not Elks, as some have reported of *Elk*, nor that *Oryx* which the ancient writers do constantly affirm to live in a continual thirst, as for the most part wild Asses do. Of these Asses are great store in *Phrygia*, *Lycaonia*, and *Africa*, and it is said, that the *Saracen King of Tunis* in *Africk*, sent unto *Ferdinand King of Naples*, a goodly great wild Asse, such an one as hath not been seen in this part of the world.

Pliny.

*Apolonius* affirmeth, that he saw wild Asses in great plenty beyond *Catadupa* in *Egypt*; so are there many in *Canda*, an Island near *Creta*: in *Persia*, in *Asia*, in *Madera*, and *Abassa*, *Arabia* desert, *Mauritania*, and *Armenia*. *Callistius* reporteth that there are such wild Asses in that region under the *Equinotial* towards the East and South, of wonderful stature, their skins (beside the usual manner) being of divers colours, interlined variably with white and black, and the Zones and streaks descending from the top of the back unto the sides, and there divided by their winding and turning, make the foles appear of admirable variety.

These Asses love the highest Mountains and rocks, as holy Scripture teacheth, *Jer. 14. The Asses feed in the high places and draw in the wind like Dragons*: which words gave occasion to some to imagine, that wild Asses would quench their thirst with the wind without water; whereas it is the manner of all wild beasts, in extremity of thirst, to gape wide and greedily draw in the cold refreshing air, and they will not drink but of pure fountain water. They live in flocks and great companies together, but in desolate places: the males going before the females, and commonly one male will lead and rule the whole flock of females, being exceeding swift, and fearful, and therefore do they often change their places of abode; and yet it is observed, that the wild Asses of *Licia* never go over the mountain that divideth them from *Cappadocia*.

Their copulation.

They engender among themselves, their females being much more lustful than the males, and therefore do the males observe and watch them with a jealous eye toward their own foles, especially after they have conceived; and the female as warily avoideth the sight of the male, especially at the time of her foaling; for if the being forth a female, the male receiveth it with all love, joy, and welcome; but if a male, then doth he with angry and envious countenance look upon it, taking it heavily that another male is bred, which in time may in the fathers place possess his dam; wherefore in a raging madness he falleth upon the fole, seeking by all his power to bite off his stones; the poor female although weakened with pain of delivery, yet helpeth her young one against the fathers rage, and like a Mother who seeing her Son slain in war, embraceth his bleeding corps, and cryeth out with doleful voice, tearing her cheeks and bleeding betwixt her breasts: so would you think this silly female Asse, to mourn for her fole, now ready to die by the Sires cruelty; saying, *O my husband why is thy spirit so treble? Why are thy eyes now become so bloody, which even now were as white as light? Dost thou look upon the face of that monster Medusa? which turneth men into stones; or dost thou look upon some new hatched horrible Dragon, or the whelp of some Lion lately littered? Why wilt thou geld this our young one which nature hath given unto us but by procreation? O wretched beast that I am, which have conceived an unhappy fole by the fathers wickedness! O my poor and unhappy son, which for a jealous fear art deprived of thy natural parts, not by the claws of Lions (for that I would endure) but by the unnatural and more then hostile teeth of thy own father.*

These wild Asses have good and strong hoofs, their swiftness is compared to the wind, and in the time that they are hunted, they cast backward with their heels stones with such violence, as they pierce the breasts of them that prosecute them if they be not very wary. They are of a large, broad, tall and beautiful body; long ears, and a silver colour, (that is as I ghesse) a bright cloud-colour, for it is but vain to imagine, that an Asse can be all white, for then were all the ancients deceived, which with one voice affirm, that he hath a black list on the back, at either side whereof are two white lines.

*Eliauns.  
Albanus.  
Oppianus.  
Varro.*

*Eliauns.*

Their food is only grasse and herbs of the earth, whereby they grow very fat, their heart being the fattest part of their body, and they will not abide any flesh-eating beast, especially the Lion whom he feareth very much, for all these strong beasts devour and eat them. These Asses are very fit for civil uses, as for plowing and sowing, for being tamed they never grow wild again, as other beasts will, and they easily grow tame. It is observed, that the same being tamed, is most tame which before time was most wild. They love figs and meal above all things, wherefore the *Armenians* use to take a certain black fish bred in their waters which is poison, and covering it with meal the wild Asses come and lick thereof, and so are destroyed. The best of them are generated of a Mare and a wild Asse tamed, for they are the swiftest in course, of hardest hoof, a lean body, but of a generous and untireable stomach. The *Indian* wild Asses have one horn in their forehead, and their

their body all white, but their head is red: So is there another beast in *India* very like a wild Asse, which the Inhabitants eat (as we have read) about the strait of *Magellana*: When these Asses are hunted with Dogs, they cast forth their fume or dung, with the favour whereof the Dogs are stayed while it is hot, and by that means the beast escapeth danger: but the Asses of *Mauritania* are very short winded, and subject to weariness and stumbling, for which cause they are more easily taken, and the best of all are not so swift as a *Barbery* horse; besides their nature is, when they see a man to stand stone still, crying, braying, and kicking, till you come at them, and when one is ready to take them, they take their heels and run away. The Inhabitants of *Arabia* Desert, by many gins and other deceitful devices take them, and on horseback follow them till they tyre, or can strike them with their darts. Their flesh being hot, doth stink and taste like an other Asses, but boyled and kept two dayes hath a pleasant taste; yet doth it not breed good blood, because it is viscous and hard to be concocted, although there be many which eat that, as also the flesh of Panthers and other such beasts.

Pliny teacheth that there is more vertue in the wild Asses milk and bones against venome and poison, than in the tame. Likewise, in the heel of an Asse, is a principal remedy against Apoplethmations and banches in the flesh, if it be applied to the inner part of the thigh. The gall draweth out botches, and must be appointed upon impostumate scars. It is used also in Emplaisters against Saint Amours fire, the leprosie, and swelling in the legs and guts. The fat with oil of herbe *Mary* by appointing the reins of the back, helpeth and catcheth that pain which was engendered by wind. The spleen dyed to powder and drunk in wine or drink, is good against the sickness of the spleen. The flesh is good against the pain in the ridge and hip-bones: and *Galen* affirmeth, that the urine breaketh and dissolveth the stone in the bladder. The ashes of the hoof helpeth the falling evil, and mingled with oil, cureth the kings evil, and the looseness of the hair. The marrow catcheth the Gowt, and the dung mixed with the yolk of an egge and applied to the forehead, stayeth bleeding: also the same curieth the hair if it be mingled with an Oxes gall and dyed: put into wine and drunk, cureth the sting of a Scorpion: and *Zoi* an *Hebrew* affirmeth very constantly, that if a man look into an Asses eye, it preserveth the sight, and hindereth the water that descendeth into the eye.

## Of the Scythian Asses.

The Asses of *Scythia* have horns wherein it is reported that the *Syrian* water of *Arcadia* may be contained, although it will ear through all other vessels be they never so hard. *Sesipater* brought of them to *Alexander* the great, who admiring the rareness, would not put them to any private use, but sent them to *Daphni*, to be offered to *Vulcan*; but that these can be properly called Asses, no man can defend, although *Herodotus* also affirm, that among the *Affians* called *Aratours*, Lib. 4. there be Asses with horns.

## Of the Indian Asses.

It is questionable whether the *Monoceros*, commonly called a *Unicorn*, the *Rhinoceros*, the *Oryx*; and the *Indian* Asse be all one beast or divers; for the *Unicorn* and *Rhinoceros* have the same things attributed to them in stories, and differ in very few reports: but for the Asses of *India*, both *Aristotle*, *Pliny* and *Eliauns*, joyntly agree, that they differ from all other whole-footed beasts, because they have one horn in the forehead, and so also have the *Rhinoceros*, *Monoceros*, and *Oryx*, but the *Indians* call it a *Unicorn*, *Coriakos*; and the horn so highly prized at this day, is thought to be of the *Rhinoceros*; but *Eliauns* and *Philes* acknowledge no other *Unicorn* then the *Indian* Asse, who in signels equalleth a Horse among the *Indians*, being all white on the body, but purple headed or red (as some say) black eyes, but *Valerianus* saith blew, having one horn in the forehead a cubit and a half long, whose upper part is red or bay, the middle black, and the neather part white, wherein the Kings and mighty men of *India* use to drink, adorning it for that purpose with sundry bracelets, precious stones, and works of gold, holding for truth that all those which drink in those horns, shall be freed from annoyance of incurable diseases, as Convulsions, the falling evil, and deadly poisons.

These wilde Asses exceed all other, both in stature of body, and also swiftness of foot, for at the first, they set forth very gently, and afterward speed their journey with better pace, so that it is very hard for any to follow them, but impossible to overgo them. The males take great pains in keeping their young ones, whom they continually watch and hide in the most remote and desert places they can finde. When they are hunted, they keep their weak young ones behind them, and fight for them very furiously, neither fear they to encounter horsemen. They are so strong, that no beast may stand before them, for they will receive the charge of Horses with such violence, that in their encounter they bite out their sides and rear their guts out of their belly: for which cause they are dreadful to Horses, who are most unwilling to joyn with them, for they never meet but they both perish.

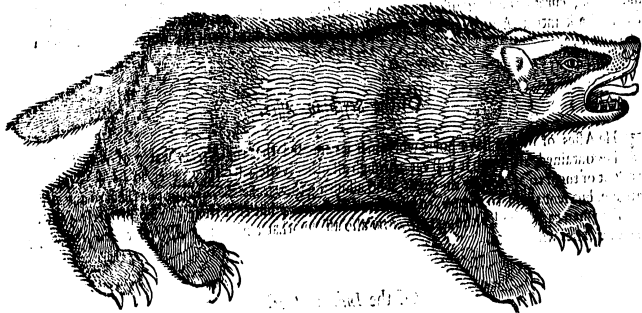
They fight with their heels, but their teeth are most dangerous, for what they apprehend in their

them they bring it clean away : and because of this rage, those which are of any years, can never be tamed. The great King of India doth once every year appoint all manner of fights both men and beasts, wherein are wilde Bulls, tame Rams, these wild Asies with one horn, *Hyaenas* and Elephants. To conclude, it is but a fable of *Volaterranus*, that faith, these Asies want a gall, for they have the bladder of the gall, a portion whereof drunk, cureth the falling evil.

### Of the *ALBORACH* and *AXIS*.

There are two other beasts to be added to the end of this rank, namely the *Alborach* among the Turks, being a fair white beast like an Ass, whereupon the Turkish Priests blasphemous idolaters, persuade the silly Pilgrims of *Mecca*, that *Mahomet* was carried up to heaven. The *Axis*, which *Pliny* speaketh, is a wilde beast, having a skin like the *Hinnulus* aforesaid, but spread over with whiter spots, which is bred in *India*. *Bellonius* affirmeth, that he saw two of them in the Castle of *Cair*, a male and a female, and either sex wanted horns, having long tails down to their mid-legs like Deer, and differ very little from Deer, saving in their large white spots and yellow colour, yielding a much more clear and founding voice than a Deer, and the female thereof is smaller than the male. This beast is by idolatrous people, dedicated to their drunken god *Bacchus*.

Of the *BADGER*, otherwise called a *Broche*, a *Gray*, or a *Banvor*.



The *Badger* could never find a *Greek* name, although some through ignorance have joisted into a *Greek* Dictionary *Mela*, whereas in truth that is his *Latin* word, *Mela* or *Meles*, and so called, because above all other things he loveth honey, and some later writers call him *Taxus*, *Tassus*, *Taxo*, and *Albertus Magnus*, *Daxus*. But whereas in the Scripture some translate *Teffon*, *Tachos*, on *Tachisch*, and plurally *Tachasim*, *Badgers*, yet is not the matter so clear, for there is no such beauty in a *Badgers* skin, as to cover the *Arke*, or to make Princes chooseth thereof : therefore some *Hebrews* say, that it signifieth an Oke of an exceeding hard skin. *Onkelus* translateth it *Salsanus*, which is a beast skin of divers colours : *Symmachus* and *Aquila* a jaeger colour, which cannot be ; but the *Arabians* *Darabach*, and the *Perians*, *Alphax*, yet it may be rather said, that this skin, spoken of *Ezod*, 25. Numb. 4. Brek. 26. be of the *Lynx*, or some such other beast : for *Tachas* cometh near *Tach*, signifying a kind of Wolf not hurtful to men, being rough and hairy in Winter, but smooth in Summer.

The *Italians* call a *Badger* *Tasso*, the *Belgians*, *Tasso*, the *French*, *Tasson*, *Taxin*, *Tasson*, *Tasso*, and sometime *Grisart*, for her colour : sometime *Blaccon*, and at *Paris*, *Bedovo*. The *Spaniards*, *Tassus*, *Taxon*, the *Germans*, *Taxi*, or *Daxi*, the *Illyrians*, *Gerepess*.

*Badgers* are plentiful in *Naples*, *Sicily*, *Lucane*, and in the *Alpine* and *Helvetian* coasts, so are they also in *England*. In *Leagne* there is a certain wilde beast, resembling both a Bear and a Hog, not in quantity, but in form and proportion of body ; which therefore may fitly be called in *Greek*, *Saxaroch*, for a *Gray*, in short legs, ears and feet, is like a Bear, but in fangs like a Swine : therefore it is observed, that there be two kinds of this beast, one resembling a Dog in his feet, which is called *Cenine* ; the other a Hog in his cloven hoof, and is called *Saxaroch* : also these differ in the fashion of their snout, one resembling the snout of a Dog, the other of a Swine : and in their meat,

Country of  
breed.  
*Calvis* *Curia*  
Diversity of  
kinds.

meat, the one eating flesh and carrion like a Dog, the other roots and fruits like a Hog, as both kinds have been found in *Normandy* and other parts of *France* and *Si. lie*. This beast diggeth her den or cave in the earth, and there liveth, never coming forth but for meat and sustenance, which it maketh out of his den : when they dig their den, after they have entered a good depth for avoiding the earth out, one of them falleth on the back, and the other layeth all the earth on his belly, and to taking his hinder feet in his mouth, draweth the belly-laden *Badger* out of the cave, which disburdeneth her carriage, and goeth in for more till all be finished and emptied. The wily Fox never maketh a Den for himself, but finding a *Badgers* cave, in her absence, layeth his excrements at the hole of the Den, the which when the *Gray* returneth, if the smell (as the labour is strong) the forbearth to enter as noisome, and so leaveth her elaborate house to the Fox. These *Badgers* are very sleepy, especially in the day time, and stir not abroad but in the night, for which cause they are called *Lucisuge* ; that is, *awakers of the light*. They eat honey, and worms, and hornets, and such like things, because they are not very swift of foot to take other creatures. They love Orchards, Vines, and places of fruits also, and in the autumn they grow therewith very fat.

They are in quantity as big as a Fox, but of a shorter and thicker body ; their skin is hard, but rough and rugged, their hair harsh and stubborn, of an intermingled grisard colour, sometime white, sometime black, his back covered with black, and his belly with white, his head from the top thereof to the ridge of his shoulder, is adorned with streaks of white and black, being black in the middle, and white at each side. He hath very sharp teeth, and is therefore accounted a deep-biting beast. His back is broad, his legs (as some say) longer on the right side than on the left, and therefore he runneth best when he getteth to the side of a hill, or a cart-road-way. His tail is short but hairy, and of divers colours, having a long face or snout like the *Zibetibus* : his forelegs being a full span long, and the hinder legs shorter, short ears and little eyes, a great bladder of gall, a body very fat betwixt the skin and the flesh, and about the heart ; and it is held that this fat increaseth with the Moon, and decreaseth with the same, being none at all at the change : his forelegs have very sharp nails, bare and apt to dig withal, being five both before and behind, but the hinder very short ones and covered with hair. His labour is strong, and is much troubled with lice about his secrets ; the length of his body from the nose which hangeth out like a Hogs nose, to the tail or rump, is some thirty inches and a little more, the hair of his back three fingers long ; his neck is short and like a Dog's : both male and female have under their hole another outwardly, but not inwardly in the male. If he be hunted out of her Den with Hounds, the bitch then grievously if she lay hold on them, wherefore they avoid her carefully, and the Hunters put great broad collars made of a Grayes skin about their Dogs neck, to keep them the safer from the *Badgers* teeth : her manner is to fight on her back, using thereby both her teeth and her nails, and by blowing up her skin above measure after an unknown manner, she defendeth her self against the strokes of men, and the teeth of Dogs : wherefore she is hardly taken, but by devices and gins for that purpose invented ; with their skins they make quivers for arrows, and some shepherds in *Italy* use thereof to make facks, wherein they wrap themselves from the injury of rain.

In *Italy* and *Germany* they eat Grays flesh, and boil with it pears, which maketh the flesh tast like the flesh of a Porcupine. The flesh is best in *September* if it be fat, and of the two kinds, the Swinish *Platina*. *Badger* is better flesh than the other. There are sundry virtues collected out of this beast ; for it Medicine made is affirmed, that if the fat of a *Badger* mingled with crude honey, and anointed upon a bare place of a horse, where the former hairs are pulled off, it will make new white hairs grow in that place : and it is certain (although the *Greeks* make no reckoning of *Badgers* grease, yet) it is a very sovereign thing to soften, and therefore *Serenus* prescribeth it to anoint them that have Fevers or Inflammations of the body,

*Nec spernendus adeps dedit, quem bestia molis.*

*Albertus.*

And not to be despised for other cures : as for example, the easing of the pain of the reins if it be given in a glyster, and likewise the fat of a Dog and a *Badger* mingled together, do loosen contracted sinews.

The asses of a *Badger* is found to help the bleeding of the stomach and the same food and drunk, preventeth danger by the biting of a mad Dog ; and *Brussellus* affirmeth, that if the blood of a *Badger* be infused into the horns of Cattel with salt, it keepeth them from the murrain, and the same dried and beat to powder doth wonderfully help the Leprosie. The brain food with oil easeth all aches ; the liver taken out of water, helpeth swellings in the mouth ; and some affirm, that if one wear soles made of *Badgers* skins in their shoes, it giveth great ease unto the Gout. The biting of this beast is venomous, because it feedeth upon all venomous meats which creep upon the earth, although *Arnoldus* be of a contrary judgement : and of this beast I can report no other thing worth the noting, save that the Noble family of the *Tanoni* in *Ferraria*, took their name from this creature.

*Of*



## Of the BEAR.



Of the name.

Faintness of the Bear.

A Bear is called in the Hebrew, *Dub*, and plurally *Dubim*; of the *Arabians*, *Dub*; of the *Chaldeans*, *Duba*, *Aldub* and *Dabonba*; of the *Greeks*, *Arctos*; of some *Dasylos*, because of the roughness of his hair; of other *Bears*, and *Monon* signifying a solitary Bear. The *Latins* call him *Dylus*, which some conjecture to be *tanquam vjlm*, signifying that it is but begun to be framed in the dams belly, and perfected after the littering thereof. The *Malians* call it *Oys*, so also the *Spaniards*; the *French*, *Autz*; the *German*, *Beer*, and *Berry*; the *Bohemians*, *Nedred*; the *Polonians*, *Vulver*; and the attributes of this beast are many among Authors, both *Greek* and *Latin*; as *Armenian* Bears, armed, filthy, deformed, cruel, dreadful, fierce, greedy, *Caldanian*, *Erymanthian*, bloody, heavy, night ranging, *Libyan*, menacing, *Numidian*, *Ossian*, head-long, ravening, rigid and terrible Bear; all which serve to set forth the nature hereof, as shall be afterward in particular discoursed.

First,

First, therefore concerning several kinds of Bears, it is observed, that there is in general two; a greater, and a lesser; and these lesser are more apt to climb trees than the other, neither do they ever grow to so great a stature as the other. Besides there are Bears which are called *Ambibla*, because they live both on the Land and in the Sea, hunting and catching fish like an *Otter* or *Beaver*, and these are white coloured. In the Ocean Islands towards the North, there are Bears of a great stature, fierce and cruel, who with their fore-feet do break up the hardest congealed ice on the Sea, or other great Waters, and draw out of those holes great abundance of fillets: and so in other frozen Seas are many such like, having black claws, living for the most part upon the Seas, except tempestuous weather drive them to the Land.

In the Eastern parts of *India*, there is a beast in proportion of body very like a Bear, yet induced with no other quality of that kind, (being neither so wild, nor ravenous, nor strong) and it is called a *Formicarian* Bear; for God hath so provided, that whereas that Countrey is abundantly annoyed with the Emmets or Ants, that beast doth so prey and feed upon them, that by the strength and virtuous humor of his tongue, the silly poor Inhabitants are exceedingly relieved from their grievous and dangerous numbers.

Bears are bred in many Countreys, as in the *Helonian Alpine* region, where they are so strong and full of courage, that they can tear in pieces both Oxen and Horses, for which cause the Inhabitants study by all means to take them. Likewise there are Bears in *Persia*, which do raven beyond all measure, and all other; so also the Bears of *Numidia*, which are of a more elegant form and composition than the residue;

*Prossit ergo nihil misero, quod cominus urso  
Fugebat Numidas, Albena nudus arena.*

And whereas *Pliny* affirmeth, that there are no Bears in *Africa*, he mistook that Countrey for *Creta*, and so some say, that in that Island be no Wolves, Vipers, or other such venomous creatures; whereof the Poets give a vain reason, because *Jupiter* was born there: but we know all, that there be no Bears bred in *England*.

In the Countrey of *Arabia*, from the Promontory *Dira* to the South, are Bears which live upon eating of flesh, being of a yellowish colour, which do far excel all other Bears, both in activity or swiftness, and in quantity of body. Among the *Kazalini* and *Lituanians*, are Bears, which being tamed are presents for Princes. *Aristotle* in his wonders reporteth, that there are white Bears in *Misia*, which being eagerly hunted, do send forth such a breath, that putrefieth immediately the flesh of the Dogs, and whatsoever other beast cometh within the favour thereof, it maketh the flesh of them not fit to be eaten: but if either men or dogs approach or come nigh them, they vomit forth such abundance of phlegm, that either the hunters are thereby choked or blinded.

*Thracia* also breedeth white Bears, and the King of *Ethiopia* in his *Hebrew* Epistle which he wrote to the Bishop of *Rome*, affirmeth, that there are Bears in his Countrey: In *Mosovia* are Bears, both of a Snow white, yellow, and dusky colour, and it hath been seen that the Noble womens Chariots drawn by six Horses, have been covered with the skins of white Bears, from the pattern to the head: and as all other creatures do bring forth some white, and some black, so also do Bears, who in general do breed and bring forth their young in all cold Countreys, some of a dusky and some of a brown black colour.

A Bear is of a most venereous and lustful disposition, for night and day the females with most ardent inflamed desires, do provoke the males to copulation; and for this cause at that time they are most fierce and angry.

*Philippus Cossius* of *Constance*, did most confidently tell me, that in the Mountains of *Savoy*, a Bear carried a young maid into his den by violence, where in venereous manner he had the carnal use of her body, and while he kept her in his den, he daily went forth and brought her home the best Apples and other fruits he could get, presenting them unto her for her meat in very amorous sort; but always when he went to forrage, he rouled a huge great stone upon the mouth of his den, that the Virgin should not escape away: at length her parents with long search, found their little Daughter in the Bears den, who delivered her from that savage and beastial captivity.

The time of their copulation is in the beginning of *Winter*, although sometime in *Summer*; (but such young ones seldom live) yet most commonly in *February* or *January*. The manner of their copulation is like to a mans, the male moving himself upon the belly of the female, which lieth on the earth flat upon the back, and either embraceth other with their fore-feet: they remain very long time in that act, inasmuch as if they were very fat at their first entrance, they disjoin not themselves again till they be made lean.

Immediately after they have conceived, they betake themselves to their dens, where they (with- out meat) grow very fat (especially the males) only by sucking their fore-feet. When they enter into their den, they convey themselves in backwards, that so they may put out their foot-steps from the sight of the hunters. The males give great honor to the females great with young, during the time of their secrecie, so that, although they lie together in one cave, yet do they part it by a division or small ditch in the midst, neither of them touching the other. The nature of all of them is, to avoid cold, and therefore in the *Winter* time do they hide themselves, chusing rather to suffer famine than cold; lying for the most part three or four months together and never see the light, whereby

Of the kinds of  
Bears,  
*Agricola*,  
*Alberinus*,  
*Olant*.

A Formicari-  
an Bear,  
*Caldanian*.

Countrey of  
breed.

*Marcellinus*.

*Volaterran*.

A secret in the  
natures of  
Bears,

Lust of Bears,

*Gillius*,  
A History.

Time of their  
copulation,

A secret.

Honor to the  
female,



came a great Bear to this Hony; and putting his head into the tree, the poor man took hold thereof, whereat the Bear suddenly affrighted, drew the man out of that deadly danger, and so ran away for fear of a worse creature.

But if there be no tree wherein Bees do breed next to the place where the Bear abideth, then they use to annoynt some hollow place of a tree with Hony, whereinto Bees will enter and make Hony-combs, and when the Bear findeth them she is killed as aforesaid. In Norway they use to faw the tree almost asunder, so that when the beast climbeth it, the fallerth down upon piked stakes laid underneath to kill her: And some make a hollow place in a tree, wherein they put a great pot of water, having annoynted it with Hony, at the bottom whereof are fastened certain hooks bending downward, leaving an easie passage for the Bear to thrust in her head to get the Hony, but impossible to pull it forth again alone, because the hooks take hold on her skin: this pot they binde fast to a tree, whereby the Bear is taken alive, and blindfolded, and though her strength break the cord or chain wherewith the pot is fastened, yet can she not escape or hurt any body in the taking, by reason her head is fastened in the pot.

To conclude, other make ditches or pits under Apple-trees, laying upon their mouth rotten sticks, which they cover with earth, and throw upon it herbs, and when the Bear cometh to the Apple-tree, the fallerth into the pit and is taken.

The herb Wolfeban or Libardine is poison to Foxes, Wolves, Dogs, and Bears, and to all beasts that are littered blinde, as the *Alpine Rhatians* affirm. There is one kinde of this called *Cyclamine*, which the *Valdensians* call *Tora*; and with the juice thereof they poyson their darts, whereof I have credibly received this story: That a certain *Valdensian*, seeing a wilde Bear, having a dart poysoned herewith, did cast it at the Bear being far from him, and lightly wounded her; it being not sooner done, but the Bear ran to and fro in a wonderful perplexity through the woods, unto a very sharp cliffe of a rock, where the man saw her draw her last breath, as soon as the poyson had entered to her heart, as he afterward found by opening of her body. The like is reported of *Hennabane*, another herb: But there is a certain black fish in *Armenia*, full of poyson, with the powder whereof they poyson Figs, and cast them in those places where wilde beasts are most plentiful, which they eat, and so are killed.

Concerning the indolent or natural disposition of a Bear, it is certain that they are very hardly tamed, and not to be trusted though they seem never to tame; for which cause there is a story of *Diana in Lyfia*, that there was a certain Bear made Jo tame, that it went up and down among men and would feed with them, taking meat at their hands, giving no occasion to fear or mistrust her cruelty: on a day, a young maid playing with the Bear lasciviously did so provoke it, that he tore her in pieces; the Virgins brethren seeing the murder, with their darts slew the Bear, whereupon followed a great pestilence through all that region: and when they consulted with the Oracle, the paynim God gave answer, that the plague could not cease, untill they dedicated some Virgins unto *Diana* for the Bears sake that was slain; which some interpreting that they should sacrifice them: *Embarus* upon condition the Priesthood might remain in his family, slew his only daughter to end the pestilence, and for this cause the Virgins were after dedicated to *Diana* before their marriage, when they were betwixt ten and fifteen year old, which was performed in the month of *January*, otherwise they could not be married: Yet Bears are tamed for labours, and especially for sports among the *Rossians* and *Lybians*, being taught to draw water with wheels out of the deepest wells; likewise stones upon sleds to the building of walls.

A Prince of *Lithuania* nourished a Bear very tenderly, feeding her from his table with his own hand, for he had used her to be familiar in his Court, and to come into his own chamber when he listed, so that she would go abroad into the fields and woods, returning home again of her own accord, and would with her hand or foot rub the Kings chamber door to have it opened, when she was hungry; it being locked: it happened that certain young Noble-men confired the death of this Prince, and came to his chamber door, rubbing it after the custom of the Bear, the King not doubting any evil, and supposing it had been his Bear, opened the door, and they presently flew him.

There is a fable of a certain wilde Bear, of huge stature, which terrified all them that looked upon her, the which *Pythagoras* sent for, and kept to himself, very familiarly using to stroke and milk her; at the length when he was weary of her, he whipspered in her ear, and bound her with an oath, that being departed she should never harm any living thing, which faith the fable, she observed to her dying day. These Bears are not for any thing that is dead, and therefore if a man can hold his breath as if he were dead, they will not harm him; which gave occasion to *Esope*, to fable of two companions and sworn friends, who travelling together met with a Bear, whereat they being amazed, one of them ran away and gat up into a tree; the other fell down and counterfeited himself dead, unto whom the Bear came and smelt at his nostrils and ears for breath, but perceiving none, departed without hurting him: soon after the other friend came down from the tree, and merrily asked his companion what the Bear said in his ear, Marry (quoth he) the warr'd me that I should never trust such a fugitive friend as thou art, which didst forsake me in my greatest necessity: thus far *Esope*.

They will bury one another being dead, as *Tzetzes* affirmeth, and it is received in many Nations, that children have been nuried by Bears: *Paris* thrown out of the City, was nourished by a Bear. There is in *France* a Noble house of the *Ursins*, whose first founder is reported to have been certain years

years together nourished by a Bear, and for that cause was called *Ursus*: and some affirm, that *Arcesius* was so, being deceived by the name of his mother who was called *Ardor*, a Bear: as among the *Latins* was *Ursula*. And it is reported in the year of our Lord 1274, that the Concubine of *Sebas Frank*, Pope *Nicholas* (being with childe as was supposed) brought forth a young Bear, which she did not by any unlawful copulation with such a beast, but only with the most holy Pope; and conceived such a creature, by strength of imagination, lying in his Palace, where she saw the pictures of many Bears; so that the holy Father being first put in good hope of a son, and afterward seeing this monster (like himself, Rev. 13.) for anger and shame detached all his pictures of those beasts. There is a mountain called the Mountain of Bears in *Cyprus*, betwixt *Gherlanus* and *Pygionus*; so called, because as some have affirmed, *Helice* and *Cynofus* were turned into that place, but the reason is more probable, because it was full of Bears, or else because it was so high that it seemed to touch the *Bear-hear*.

There is a Constellation called the Bear in the figure of seven Stars like a Cart, whereof four stand in the place of the wheels, and three in the roan of Horses. The *Septentrion* call them *Triones*, that is yoked Oxen. But there are two Bears, a greater and a lesser. The greater is called *Callisto*, after the name of *Lycaons* daughter, who reigned in *Arcadia*, whereof many give divers reasons. For they say *Callisto* was a companion of *Diana*, and used to hunt with her being very like unto her, and one day *Jupiter* came to her in the likeness of *Diana*, and deflowered her, and when she was with childe, *Diana* asked how that happened, to whom *Callisto* answered, that it happened by her fault: wherewith the Goddess being angry, turned her into a Bear, in which shape she brought forth *Arctas*, and they both wandering in the Woods, were taken and brought for a present unto *Lycaon* her father: And upon a day, the Bear being ignorant of the law, entered into the Temple of *Jupiter Lycaon*, and her son followed her, for which the *Arcadians* would have slain them both, but *Jupiter* in pity of them took them both into Heaven, and placed them among the Stars.

Other say that *Callisto* was turned into a Bear by *Luna*, whom afterward *Diana* slew, and coming to knowledge that it was *Callisto*, she placed her for a sign in Heaven, which is called *Ursa Major*, the great Bear; which before that time was called *Hamaxo*; but the reason of these fables is rendered by *Palapbatus*, because that *Callisto* going into a Bears den, was by the Bear devoured, and so her foolish companions seeing none come forth but the Bear, fondly imagined that the Virgin was turned into a Bear.

There is another Constellation next to the great Bear, called *Arctophylax*, *Butor*, or the little Bear, in whose girdle is a bright Star called *Arturus*, and from this constellation of Bears, cometh the denomination of the *Arctique* and *Antarctique* poles. Other affirm, that the two Bears were *Helice* and *Cynofus*, the two Nuries of *Jupiter*, because sometime they are so named; this cause whereof is apparent in the Greek tongue, for *Helice* is a Star, having as it were a tail rowled up; and *Cynofus*, a tail at length like a Dog: They are also modified for sport, for as their bodies do in one sort resemble Apes, so do also their dispositions being apt to sundry gestures and postures, lying upon their backs, and turning their hands and feet, rock themselves upon them as a woman rocketh her childe in a cradle; but principally for fight: for which occasion they were preserved of old time by the *Romans*: For when *Messala* was Consul, *Embarbarus* *Damianus* presented in one ring or circle, an hundred Bears, and so many hunters with them.

— Rabido nec proditoris uris,  
Furiantem huius vivi tendebat uris;  
Sic placidus licet, & lambit dignissima manus;  
Si dolor & bilis, si iusta coegit ira,  
Ursus erit, uelut demum in pelle saevius.

They will not willingly fight with a man, although men may do it without hurt, for if they annoynt or sprinkle the mouths of Lyons or Bears with *Vitriol* or *Coppers*, they will so bind their chaps together, that they shall not be able to bite, which caused *Martiall* to write thus;

Preceps sanguinea dum se rotat usque arena,  
Impetum visque effudit ille fugam;  
Splendida jam lecto essent venabula ferra:  
Nec volentes excussa lancea tora manu.

Depredat vacuo venator in aere predam,  
Sivophare ferus utrophque arte places.

*Alexander* had a certain *Indian* Dog given unto him, to whom was presented a Boar and a Bear to fight withall, but he disdaineth them, would not once regard them; but when a Lyon came, he rook up and fought with him: Bears they will fight with Buls, Dogs; and Horses: when they fight with Buls, they take them by their horns, and so with the weight of their body they weary and press the beast, untill they may easily slay him; and this fight is for the most part on the back: A Bear necessary set on by a Bear in a publick spectacle, was did easily cast him off from the hold he had on his horn. He doth not adventure on a wilde Boar, except the Boar be asleep, or not seeing her. There is also a mortal hatred betwixt a Horse and a Bear, for they know one another at the first sight, and prepare to combat, which they rather do by policy then by strength: The Bear falling flat on his back,





They have certain hairs about their mouth, which seem in their quantity or bigness to be rather horn than they are so hard, but their bones are most hard of all and without marrow: Their forefeet are like a Dogs, and their hinder like a Gooses, made as it were of purpose to go on the land, and swim in the water, but the tail of this beast is most strange of all, in that it cometh nearest to the nature of fishes, being without hair, and covered over with a skin like the scales of fish, it being like a foal, and for the most part six fingers broad and half a foot long, which some have affirmed the beast never pulleth out of the water; whereas it is manifest, that when it is very cold, or the water frozen he pulleth it up to his body, although *Agriolus* affirm, that his hinder legs and tail freeze with the water; and no lesse untrue is the assertion, that they compell the Otter in time of cold and frost, to wait upon their tail, and to trouble the water so that it may not freeze round about them; but yet the Beaver holdeth the Otter in subjection, and either overcometh it in fight, or killeth it with his teeth.



This tail he useth for a stern when he swimmeth after fish to catch them. There hath been taken of them whole tails have weighed four pound weight, and they are accounted a very delicate dish, for being dressed, they eat like Barbies: they are used by the *Laborians* and *Savoyards* for meat allowed to be eaten on fish-days, although the body that beareth them be fesh and unclean for food. The manner of their dressing is, first roasting, and afterward

Billonius.

Their building of Dens.

Albertus. Olam Mag.

Albertus.

A secret.

feeling in an open pot, that for the evil vapor may go away, and some in pottage made with Saffron; other with Ginger, and many with Brine; it is certain that the tail and forefeet are very sweet, from whence came the Proverbe, *Teat sweet is that fish which is not fish at all*.

These beasts use to build them Caves or Dens near the Waters, so as the Water may come into them, or else they may quickly leap into the water, and their wit or natural invention in building of their Caves is most wonderful: for you must understand that in the night time they go to land, and there with their teeth gnaw down boughs and trees which they likewise bite very short fitting their purpose, and so being busied about this work, they will often look up to the tree when they perceive it almost asunder, thereby to discern when it is ready to fall, lest it might light upon their own pates: the tree being down and prepared, they take one of the oldest of their company, whose teeth could not be used for the cutting, (or as others say, they constrain some strange Beaver whom they meet withal) to fall flat on his back (as before you have heard the Badgers do) and upon his belly lade they all their timber; which they so ingeniously work and fasten into the compass of his legs that it may not fall, and so the residue by the tail, draw him to the water side, where these buildings are to be framed: and this the rather seemeth to be true, because there have been some such taken, that had no hair on their backs, but were pilled; which being espied by the hunters, in pity of their slavery, or bondage, they have let them go away free.

These beasts are so constant in their purpose, that they will never change the tree that they have once chosen to build withal, how long time so ever they spend in biting down the same: it is likewise to be observed, that they never go to the same, during the time of their labour, but in one and the same path, and so in the same return to the water again. When they have thus brought their wood together, then dig they a hole or ditch in the bank side, where they underfet the earth to bear it up from falling, with the aforesaid timber; and so they proceed, making two or three rooms like several chambers, one above another, to the intent that if the water rise they may go further, and if it fall they may descend unto it. And as the husbandmen of Egypt do observe the buildings of the Crocodiles, so do the inhabitants of the Country where they breed, observe the Beavers, that when they build high, they may expect an inundation, and so on the Mountains; and when they build low, they look for a calm or drought, and plow the vallies. There is nothing so worthy of this beast as his stones, for they are much sought after and desired by all Mercantiles, so that they will give for them any great price.

There is both in male and female; certain bunches under their belly, as great as a Goose's egg, which some have unskillfully taken for their cods, but between these is the secret and privy place of both sexes; which tumours or bunches are nothing else, but a little fleshy bag within a little thin skin, in the middle whereof is a hole or passage, out of which the beast sucketh a certain liquor, and after-ward

ward therewith anointeth every part of her body that she can reach with her tongue. Now it is very plain that these bunches are not their cods, for these reasons; Because that there is no passage either of the feed into them, or from them into the yard: Besides, their stones are found within their belly, neither ought this to seem strange, seeing that Hares have the like bunches, and also the *Mojebus* or *Muskeat*: the female hath but one passage for all her excrements, and to conceive or bring forth young ones.

It hath been an opinion of some, that when a Beaver is hunted and is in danger to be taken, she bitheth off her own stones, knowing that for them only her life is sought, which caused *Alcians* to make this Emblem,

*Et pedibus segnis, tumida & propendulus abeo,  
Hac tamen insidias effugit arte fiber:  
Mordicus ipse sibi medicata virilia vellit:  
Atque abiecit sese gnarus ob illa peti.  
Hujus ab exemplo discas non parere rebus,  
Et vitam ut redimas hostibus ara dare.*

The Beaver doth not bite off her own stones.

Teaching by the example of a Beaver, to give our purse to thieves, rather then our lives, and by our wealth to redeem our danger, for by this means the Beaver often escapeth. There have been many of them found that wanted stones, which gave some strength to this error, but this was exploded in ancient time for a fable; and in this and all other honest discourses of any part of Philosophy, the only mark whereat every good student and professor ought to aime, must be verity and not tales; wherein many of the ancient have greatly offended (as is manifested by *Marcellus Virgilius*) especially *Plato*: and this poyson hath also crept into and corrupted the whole body of Religion. The Egyptians in the opinion of the aforesaid *Castration*, when they will signifie a man that ureth himself, they picture a Beaver biting off his own stones. But this is most false, as by *Strabo*, *Plinius*, *Discordes*, and *Albertus*, is manifested. First, because their stones are very small, and so placed in their body as are a Boars, and therefore impossible for them to touch or come by them. Secondly, they cleave so fast unto their back, that they cannot be taken away but the beast must of necessity lose his life; and therefore ridiculous is their relation, who likewise affirm, that when it is hunted (having formerly bitten off his stones) that he standeth upright and sheweth the hunters that he hath none for them, and therefore his death cannot profit them, by means whereof they are averted and seek for another;

Heur. An emblem.

These Beavers eat fish, fruits, and the bitter rindes of trees, which are unto them most delicate, Their food especially Aldern, Poplar, and Willow; whereupon it is proverbially said, of one that serveth another for gain: *Sic me fides quotide ut piber falcem*, you love me as the Beaver doth the Willow, which eateth the bark and destroyeth the tree.

They are taken for their skins, tails, and cods, and that many ways; and first of all when their Calves are found, there is made a great hole or breach therein, whereinto is put a little Dog, which the beast espying, flyeth to the end of her den, and there defendeth her self by her teeth, till all her structure or building be raised, and the laid open to her enemies, who with such instruments as they have prefer, beat her to death: some affirm that she rouzeth up her body, and by the strong favour of her stones she driveth away the Dogs, which may be probable, if the stones could be seen. These Dogs are the same which hunt wild fowl and Otters.

Their cause of taking.

It is reported that in *Prussia* they take them in bow-nets, baited with the rinde of trees, whereinto they enter for the food, but being entrapped cannot go forth again. They cannot dive long time under water but must put up their heads for breath, which being espied by them that beset them, they kill them with gun-shot, or pierce them with Otters spears, so that one would think seeing such a one in the water, that it was some hairy kind of fish; and his nature is, if he hear any noise to put his head above water, whereby he is discovered and loseth his life. His skin is precious in *Polonia*, either for garment, or for Gloves, but not so precious as an Otter, yet it is used for the edging of all other fur garments, making the best shew and enduring longest; they are best that are blackish, and of the bellies which are like felt wool, they make caps and stockings against rain and foul weather.

A secret.

The medicinall vertues of this beast are in the skin, the urine, the gall and the cods: and first, a garment made of the skins, is good for a Paralytick person; and the skins burned with dry Onions and liquid pitch, stayeth the bleeding of the nose, and being put into the soles of shoes easeeth the Gowt. The urine preserved in the bladder, is an antidote against poyson: and the gall is profitable for many things, but especially being turned into a glew it helpeth the falling evil. The genitals of a Beaver are called by the Physicians *Cassorium*, and therefore we will in this discourse use that word for expressing the nature, qualities, remedies, and miraculous operation thereof, wherefore they must be very warily and skillfully taken forth, for there is in a little skin compassing them about a certain sweet humor (called *Humor Melleus*) and with that they must be cut out, the utter skin being cut asunder to make the more easie entrance, and the Apothecaries use to take all the fat about them, which they put into the oil of the *Cassorium*, and sell it unto fisher-men to make bait for fishes. The females have stones or *Cassorium*, as well as the males, but very small ones. Now you must take great heed to the choise of your Beaver, and then to the stones which

The medicinal vertues. Albertus. A tink. Pliny.

mult grow from one root conjoynd, otherwise they are not precious, and the beast mult neither be a young one nor one very old, but in the mean betwixt both, being in vigor and perfection of strength.

Interpretat.  
The use up-  
on of Castoreum.

The Beavers of Spain yeeld not such virtuous *Castoreum* as they of *Pontus*, and therefore if it be possible, take a *Pontique* Beaver, next one of *Gallata*, and lastly of *Asiick*. Some do corrupt them putting into their skin Gum and *Ammoniack* with blood, other take the reins of the beast, and so I make the *Castoreum* very big, which in it self is but small. This beast hath two bladders, which I remember not are in any other living creature, and you must beware that none of these be joynd to the *Castoreum*. You may know if it be mingled with *Ammoniack* by the taste, for although the colour be like, yet is the favour different. *Platarius* sheweth, that some adulterate *Castoreum*, by taking off his skin, or some cold newly taken forth of another beast, filling it with blood, sinews and the powder skin of *Castoreum*, that so it may not want his strong smell or favour; other fill it with earth and blood: other with blood, rosen, gum, sinews and pepper, to make it taste sharp; but this is a falsification discernible, and of this sort is the *Castoreum* which is sold in *Venice*, as *Brasovola* affirmeth: and the most of them sold at this day are bigger then the true *Castoreum*, for the just weight of the right stones is not above twelve ounces and a half, one of them being bigger then the other, bearing six fingers breadth long, and four in breadth. Now the substance contained in the bag is yellowish, solid like wax, and sticking like glue, not sharp and cracking betwixt the teeth (as the counterfeits is). These stones are of a strong and stinking favour, such as is not in any other, but not rotten and sharp, as *Gremmatians* affirm; yet I have smelled of it dried, which was not unpleasant, and things once seasoned with the favour thereof, will ever taste of it, although they have not touched it, but lie covered with it in the same box or pot; and therefore the *Castoreum* of *Persia* is counterfeited, which hath no such smell, for if a man smell to the right *Castoreum*, it will draw blood out of his nose.

After it is taken forth from the beast, it must be hung up in some place to be dried in the shadow, and when it is dry, it is soft and white: it will continue in strength six years, and some say seven; the *Persians* affirm, that their *Castoreum* will hold his virtue ten years, which is as false as the matter they speak of is counterfeited. *Archigenes* wrote a whole book of the virtue of this *Castoreum*, wherunto they may resort, that require an exact and full declaration of all his medicinal operations: it shall only be our purpose, to touch some general heads, and not to enter into a particular discovery thereof.

Being to be dried as is declared, it must be warily used, for it falleth out herein as in other medicinal subjects, that ignorance turneth a curing herb or substance, into a venomous and destructive quality; therefore we will first of all set down the dangers to be avoided, and afterward some particular cures that come by the right use of it. Therefore it must be understood that there is poison in it, not naturally, but by accident, as may be in any other good and wholesome matter: and that especially in the smell or favour thereof, wherunto if a woman with child do smell, it will kill the child unborn and cause abortment; for a womans womb is like a creature, nourished with good favours, and destroyed with evil; therefore burning of feathers, shoo-soles, woollen clothes, pitch, *Gambum*, gum, onions, and garlic is noysom to them. It may be corrupted not only as is before declared; but also, if it be shut up close without vent into pure aire, when it is hanged up to be dried, or if the bag be kept moist, so that it cannot dry; and it is true (as *Avicenna* saith) that if it be used being so corrupted, it killeth within a dayes space, driving one into madness, making the sick person continually to hold forth his tongue, and infecting him with a Fever by inflaming the body, loosing the continuity of the parts, through sharp vapors arising from the stomach: and for a proof that it will inflame, if you take a little of it mingled with oil, and rub upon any part of the body, or upon your nail, you shall feel it.

But there is also a remedy for it being corrupted; namely, Asses milk mingled with some sharp syrup of *Citron*, or if need require, drinke a dram of *Philos* Antidote at the most; or take butten and sweet water which will cause vomit, and vomit therewith so long, as you feel the favour of the stone, and afterward take syrup of Limmons or Citrons: and some affirm upon experience, that two penny weight of *Coriander-seed*, scorched in the fire, is a present remedy for this evil. And it is most strange, that seeing it is in greatest strength, when the favour is hottest, which is very displeasing to a mans nature in outward appearance, yet doth it never harm a man taken inwardly, (being pure and rightly compounded) if the person be without a Fever, for in that case only it doth hurt inwardly, otherwise apply it to a moist body lacking refrigeration, or to a cold body wanting exaltation, or to a cold and moist body, you shall perceive an evident commodity thereby, if there be no Fever: and yet it hath profited many where the Fever hath not been over hot, as in Extasies and Lethargies, ninnited with white Pepper, and Melicrate, and with Rose cakes laid to the neck or head. The same virtues it hath being outwardly applied and mingled with oil, if the bodies be in any heat, and purely without oil, if the body be cold; for in heating it holdeth the third degree, and in drying the second. The manner how it is to be administered is in drink, for the most part, the sweet liquor being taken from it, and the little skins appearing therein cleaned away, and so it hath among many other these operations following: Drunk with Vinegar, it is good against all venom of Serpents, and against the *Chameleon*, but with this difference, against the *Scorpion* with wine, against Spiders with sweet water, against the *Lizzards* with Myrrite, against *Dipsa* and *Cerastra*, with *Oponax*, or wine made of *Rew*, and against other Serpents with wine simply.

Take

Take of every one two drams, for a cold take it a scruple and a half in four cups of wine, used with *Ladanum*, it cureth the Fitulles and Ulcers, provoking freezing by smelling to it; procureth sleep, they being anointed with it; Maiden-weed and Conserve of Roses, and being drunk in water, helpeth Phrensie, and with the *Ribes* and Maiden-weed aforeaid, easech head-ach; being laid to the head like a plaister, it cureth all cold and windy affections therein; or if one draw in the smok of it perumed, though the pain be from the mothers womb, and given in three cups of sweet Vinegar fasting, it helpeth the Falling sickness, but if the person have often fits, the same given in a Glyster, giveth great ease: Then mult the quantity be two drams of *Castoreum*, one sextary of honey and oil, and the like quantity of water, but in the fit it helpeth with Vinegar by smelling to it. It helpeth the Pulse, taken in *Rew* or wine, sod in *Rew*, so also all heart trembling, ach in the stomach, and quaking of the sinews. It being infused into them that lie in Lethargies with Vinegar and Conserve of Roses doth presently awake them, for it strenghtneth the brain, and moveth iternation. It helpeth oblivion coming by reason of sickness, the party being first purged with *Hiera Buff*, *Castoreum*, with oil bound to the hinder part of the head, and afterward a dram drunk with *Melicrate*, also taken with oil, cureth all Convulsion proceeding of cold humors, if the Convulsion be full and perfect, and not temporal or in some particular member, which may come to passe in any sickness.

The same mixed with hony helpeth the clearness of the eyes, and their inflammations; likewise used with the juice of Popy, and infused to the ears, or mixed with hony, helpeth all pains in them. With the seed of Hemlocks beaten in Vinegar, it tharneth the sense of hearing, if the cause be cold, and it cureth toothach infused into that ear with oil on which side the pain resteth; for *Hippocrates* sent unto the wife of *Aspasius* (complaining of the pain in her cheek and teeth) a little *Castoreum* with Pepper, advising her to hold it in her mouth betwixt her teeth. A perfume of it drawn up into the head and stomach, easech the pains of the lights and intrails, and given to them that sigh much with sweet Vinegar fasting, it recovereth them. It easech the Cough, and dilutions of rhume from the head to the stomach, taken with the juyce of black Popy. It is preservative against inflammations and pains in the guts or belly (although the belly be swollen with cold windy humors) being drunk with Vinegar, or *Oxyacate*; it easech the Colick being given with Annis beaten small, and two spoonfuls of sweet water; and it is found by experiment, that when a horse cannot make water, let him be covered over with his cloth, and then put underneath him a fire of coals, wherein make a perfume with that *Castoreum* till the Horses belly and coods smell thereof; then taking away the coals, walk the horse up and down covered, and he will presently to stile.

To loosen the belly they use *Castoreum* with sweet water two drams, and if it be not forcible enough, they take the root of a fect Cucumer one dram, and the fume of Salt Peter two drams. It is also used with the juice of Withy and decoction of Vinegar applied to the reins and genital parts like a plaister against the *Gonorrhoea* passion. It will stir up a womans monthly courses, and cause an ease travail, two drams being drunk in water with Penny-royal. And if a Woman with child go over a *Sevier*, she will suffer abortment; and *Hippocrates* affirmeth, that a perfume made with *Castoreum*, Asses dung, and Swines greafe, openeth a closed womb.

There is an Antidote called *Diacosm*, made of this *Castoreum*, good against the Megrim, Falling sickness, Apoplexies, Palsies, and weakness of lims, as may be seen in *Myresius*: against the impotency of the tongue, trembling of the members, and other such infirmities. These virtues of a Beaver thus described, I will conclude this discourse with a History of a strange beast like unto this, related by *Thurinus Campus-Idellus* (a noble Knight) who affirmed, that there are in *Arcadia*, seven great lakes some 30 miles compas, and some lesse, whereof one is called *Garioli*, out of which in *Arno* 1510 about the middle of Summer, in a morning came a beast about the bigness of a water Dog, having feet like a Goose, who with his tail easily threw down small trees, and presently with a swift pace he made after some men that he saw, and with three strokes he likewise overthrew three of them, the residue climbing up into trees escaped, and the beast without any long tarrying, returned back again into the water, which beast hath at other times been seen, and it is observed, that this appearance of the Monster, did give warning of some strange evils upon the Land: which story is recorded by *Helior Barthius*.

## Of the BISON.

A Bison called of some *Latins*, though corruptly, *Ursion*, and *Vesion*; of the *Grecians*, *Bison*; of the *Lituanians*, *Suber*; of the *Polonians*, *Zubor*, from whence some *Latins* derived *Zubro*, for a Bison. Of the *German*, *Vijent*, and *Vesent*, and *Wifent*: a beast very strange as may appear by his figure prefixed, which by many Authors is taken for *Urus*, some for a *Bugil*, or wilde Ox; other for *Rangifer*, and many for the beast *Tarandus* a *Buff*. By reason whereof there are not many things, which can by infallible collection be learned of this beast among the writers; yet it is truly and generally held for a kind of wilde Ox, bred in the Northern parts of the World for the most breed part, and never tamed, as in *Sybia*, *Moscovia*, *Hercynia*, *Thracia*, and *Prussia*. But those tall white *Phibisopari*. Oxen which are said to be in *Laponia*, and the Dukedom of *Angermannia*, are more truly said to be *Uri*, as in their story shall be afterward declared. Their name is taken from *Tbracia*, which their name.

E 2

was

*Castoreus gra-  
vi mulier spiritus  
reccumbit.*

*Vegetius.*

*A secret.*

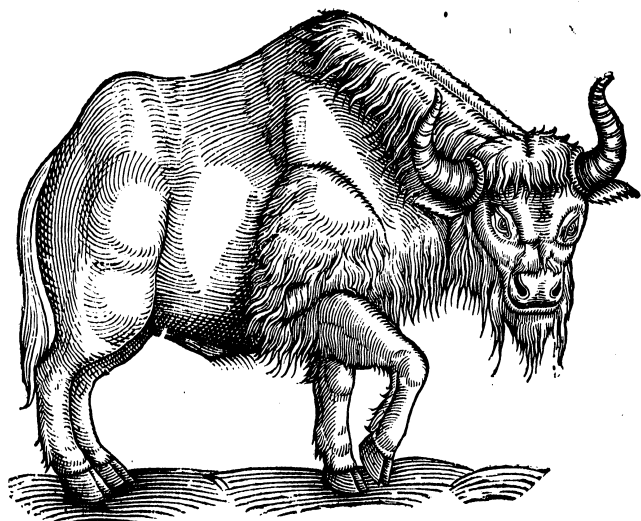
*A miraculous  
History of a  
Monster.*

*Of the name.*

*Place of their  
breed.*

*The reason of  
their name.*

The dangers  
in the use of  
*Castoreum*.



*Varinus.*  
*Stephanus.*  
A secret in the  
Lake *Dicaea*.

Several kinds.

The great Bi-  
fon.  
The several  
parts.

The strength  
of this Beast.  
The quantity  
of Bifons.  
The strength  
of their conge.

The flesh of  
this Beast.  
*Bonatus.*  
*Bifon.*

A secret in the  
inward heat of  
this Beast.

Their hunting

was once called *Bifonia*, and the people thereof *Bifones*, from *Bifon* the Son of *Cicm* and *Tarpichoro*; and thereof came *Bifonia Gruis*, cranes of *Thracia*, and *Bifonia Lacus*, for the lake or sea of *Dicaea*, near *Abdera*, where never living thing, or other of lesser weight was calt in but it presently sunk and was drowned.

This Bifon is called *Taurum Paenium*, the *Paenian* Bull, whereof I finde two kinds, one of greater, and another of lesser size, called the *Scotian*, or *Caldonian* Bifon, whereof you shall see the picture and qualities at the foot of this History.

The greater is as big as any Bull or Oxe, being maned about the neck and back like a Lion, and hath hair hanging down under his chin or nether lip like a large beard: and a rising or little ridge down along his face, beginning at the height of his head, and continuing to his nose very hairy; his horns great and very sharp, yet turning up towards his back, and at the points hooked like the wilde Goats of the Alpes, but much greater: they are black of colour, and with them through the admirable strength of his neck can he toss into the air, a horse and horseman both together. They are as big as the *Dixtarii* which are the greatest *Stallions* of *Italy*. Their face looketh downward, and they have a strange strength in their tongue, for by licking they grate like a file any indifferent hard substance, but especially they can therewith draw unto them any man or beast of inferior condition, whom by licking they wound to death.

Their hair is red, yellow, or black, their eyes very great and terrible; they smell like a *Moschus* or *Musk-cat*, and their mane reacheth over their shoulders, shaking it resfully when he brayeth; their face or forehead very broad, especially betwixt their horns, for *Sigismund* King of *Polonia*, having killd one of them in hunting, stood betwixt his horns, with two other men not much lesser in quantity then himself, who was a goodly well proportioned and personall Prince.

There are two bunches on his back, the former near his shoulders, which is the higher, and the other near the rump, which is somewhat lower. I have seen the horns of a Bifon, which was in the hands of a Goldsmith to tip with silver and gilt, that it might be fit to drink in: it did bend like the talon of an Eagle or Gryphon, or some ravenous bird. The flesh in Summer time is moist fat, but it tasteth so much of wilde Garlicke, or Ramses, that it is not pleasant to eat, being full of small veins and strings, and is accounted a noble and strong kind of flesh: the blood is the most purple in the world, excelling in colour any purple, and yet for all that it is so hot, that being let forth when the Beast dyeth, within two houres space it putrefeth, and the flesh it self in the coldest Winter will not keep sweet many houres, by reason of the immoderate heat thereof, if the Hunter do not alter the fall of the beast, separate from it the intails: and which is most strange of all, being pierced alive with any hunting spear, dart, or sword, the weapon by the heat of the body is made so weak and soluble, that it cometh forth as flexible as lead: and to conclude, it is a most noble and fierce spirited beast, never afraid, or yielding till breath faileth, neither can he be taken with any nets or gins, untill they be thoroughly wearied: wherefore they which hunt him, must be

be very strong, nimble and skilful men, or else that sport will be their own undoing and overthrow.

Therefore when they go to hunt this Bifon, they choose a place replenished with large trees, neither so great that they cannot easily wind about them, nor so little that they shall not be able to cover their bodies from the horn or tongue of the beast: behind which the hunters place themselves out of sight: and then the Dogs rouse up the beast, driving him to that place where the hunters stand; whom the beast first espeth, to him he maketh force, who must warily keep the tree for his shield, and with his spear wound him where he can, who will not fall without many mortal strokes, but waxe more and more eager, not only with horn, but with tongue, for if he can but apprehend any part of the hunters garment with his tongue, he loseth no hold but draweth him unto him, and with his horn and feet killeth him: but if the fight be long, and so the hunter wearied and out of breath, then doth he calt a red cap unto the beast, who maketh at it with head and feet, never leaving till it be all in pieces; and if another come to help him as hunters mult, if they will return alive, then shall he easily draw the beast to combate, and forsake the first man, if he cry *Lu-lu-lu*.

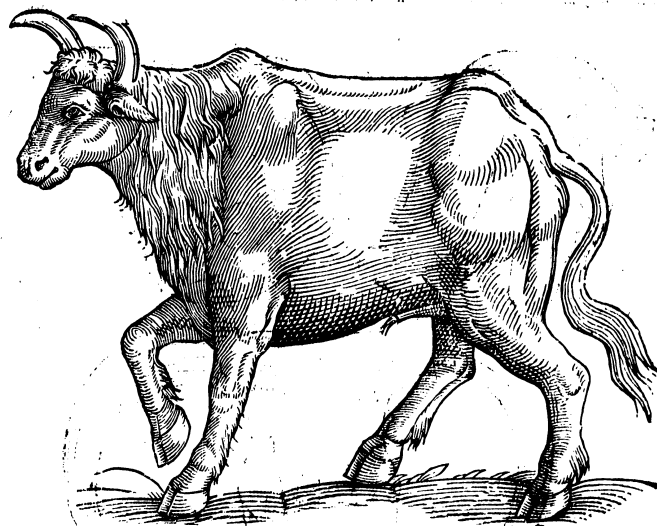
*Pausanias* sheweth how these Bifons are taken alive, in this sort. The hunters (saith he) chuse out some steep and slippery down hill, whereupon they lay skins of beasts newly taken off, and if they want such, then anoint they old skins with oil, and so leave them spread upon those sleeping or bending passages; then raise they the beasts, and with Dogs and other means on horseback drive them along to the places where they laid their hides, and as soon as they come upon the skins they slip and fall down, rowling headlong till they come into the valleys, from whence they constrain them back againe some other way, three or four times a day, making them fall down the hills as aforesaid, and so wearying them with continual hunting, and fasting. At the last they come unto them, when they are no more able to rise for faintness, and give them Pine-apples taken out of the shells, (for with that meat are they delighted) and so while they eagerly feed and lie weary on the ground, they intail them in bands and manacles, and lead them away alive. The medicines coming from this Beast may be conjectured to be more forcible, then of common and ordinary Oxen, but because they were not known to the *Grecians* and *Arabians*, and we finde nothing recorded thereof; we will conclude the story of this great Bifon, with good opinion of the virtues, though we are not able to learn or discover them to others.

*Sigism. Bari.*

In *Dicaea*.  
How Bifons  
are taken alive?

The medicines  
not known.

### Of the white SCOTIAN BIFON.



IN the Woods of Scotland, called *Callender* or *Caldar*, and in ancient time *Caldonia*, which reacheth from *Minteb* and *Ernall*, unto *Albion* and *Loquabaria*, there are bred white Oxen, maned about the neck like a Lion, but in other parts like ordinary and common Oxen: This wood was once full of them, but now they are all slain, except in that part which is called *Gumirnaid*. This beast is so hateful

The nature of this Bison, hateful and fearful of mankind, that it will not feed of that grasse or those hearbs, whereof he savour-eth a man hath touched, no not for many days together; and if by art or policy they happen to be taken alive, they will die with very fullen grief. If they meet a man, presently they make force at him, fearing neither Dogs, Spears, nor other weapons. Their flesh is very pleasant, though full of sinews, and very acceptable to the greatest Nobles, for which cause they are grown to a small number; their qualities being like to the former beast, excepting their colour and beard, I will term them a white Caledonian, or *Scotian BISON*.

### BONASUS, the figure of the Head and Horns.

Of the name, **T**his beast is called in Greek

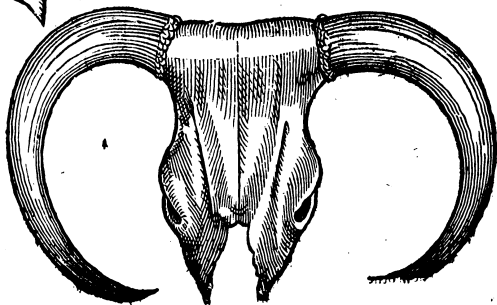
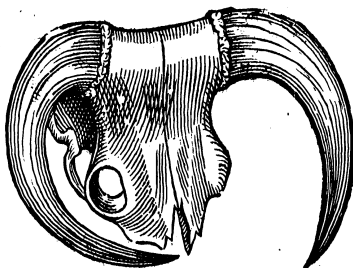
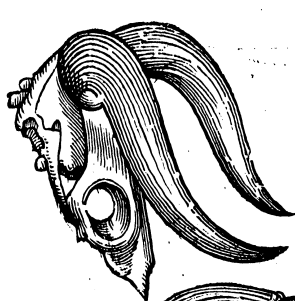
*Bengalos*, and in *Latin*, *Bonajus*, and is also called *Monopios*, or *Monopios*, and once in *Aristotle*, *Solimbis*, the *Bohemians*, *Loli*, now the *Germans* & *English* call the long hair about the neck of any beast, a *Mane* or *Mane*, from whence cometh this word *Monopios*, which signifieth a maned Ox. This *Bison* is the greatest beast, Bull or Ox, though it be shorter in length, yet are the sides larger and broader then all other.

The reason of the name *Monopios*.

Places of their breed.

They are bred in *Russia* in the mountain *Mesopus*, not in *Lydia* and *Phrygia*, as *Solimus* and *Albertus* have delivered; being deceived, because the *Pennians* were joynt with the *Medians* which they derive from *Madi* a people of *Asie*, whereas the *Pennians* and *Medi* in *Pliny* (as is observed by *Hermolus* in his *Catagions* of *Pliny*) are a people of *Thracia* in *Europe*: so called of *Paeon* the Son of *Endymion* and brother of *Epeneus*, who was seated near the river *Axius* in *Macedonia*: for it was agreed

*Pausanias*.



betwixt

betwixt the two brethren striving for the kingdom, that he which was overrun by the other, should yield the kingdom in quietness to his brother.

The head of this beast is like the head of an Ox, Bull, or Horse, but the horns bending round to the sides of the check, by reason whereof he hath no defence by them, neither can a man be hurt that is cast upon them. His neck is very thick with a large mane, from his eyes down to his shoulders in length like an Horse, but the hair thereof is much softer, and lyeth more smoothly, the uppermost hairs being harther, and the undermost softer like wool. Their colour betwixt red and ash colour, but black and yellow appeareth not in them. They have no upper teeth, in this point resembling an Ox and other horned beasts; their horns being in compass about nine inches, and somewhat more, are very smooth and black like varnish. Their voice is like the voice of an Ox, their legs all hairy, and their feet cloven, their tail too short for the other members of the body like a Bugles, their back stretched out at length, is as long as a feat for seven men; their flesh is very sweet, for which cause he is much sought for in hunting; he will with his feet dig up the ground like an Ox or Bull in his rage, when he is once struck, he flyeth away, fighting with his heels backward; and whereas nature hath denied him the benefit of horns, which other beasts have, so that he is only adorned and not armed by those weapons, a Soldier that cannot draw forth his Sword, she hath given him the secret operation of his dung, which in his chase he casteth forth of his body so plentifully upon the Dogs or other that pursue him, by the space of four paces backward, that he stayeth their course, and the heat of his dung is so admirable, that it scorseth or burneth the hair or skin of any beasts or men that hunt him: neither hath this time such a tedious operation at any other time, but only when the beast flyeth, being hunted and pursued for life, at other times it lying quiet, there is no such virtue therein: neither ought this to seem incredible, seeing many other beasts in their chase, have the like or at the least do then eject their excrement more plentifully and noisily then at other times: as the *Caveil-fish*, for when in chase the intrails are heated, and the passage somewhat restrained, so that the holding in of breath breedeth more wind in the guts, it may very naturally chance, the excrement being with the inclosed wind and heat sent forth by violent eruption, that it may fly far backward, and also burn as aforesaid. These beasts Calve in the Mountains, and before that time cometh the chuseth a place, which she walleth in with the abundance of her own dung, so high as it may cover her young one, for there is no beast that is naturally so full of excrement as a *Bonajus*. Their ears are very broad as the Poet saith, *Patula cornua sub cornibus aures*, broad ears, under crooked winding blunt horns; the skin is so large, that it hath covered a good part of a house, the inward colour whereof is like the earth whereon the beast did use to feed. That excellent Physician of England *John Cey*, did send me the head of this beast, with this description, in an Epistle, saying.

"I Send unto thee the head of a great wilde beast, the bare mouth and the bones supporters of the horns being very weighty, and therefore bearing up some like heavy burden, the horns are recurved and bending backward, so that they do not spire directly downward but rather forward, though in a crooked manner, which because it could not appear forward, as they do when the beast is alive, therefore they are described turning on the one side: the space betwixt the horns or breadth of the forehead, is three *Roman* palms and a half; the length of the horns, three palms one finger and a half; and their compass where they are joynted to the head, is one foot one palm and a half. In the Cattle of *Warwick* where are preserved the Armor and Spear of one Earl *Guy* of *Warwick* a most valiant strong man, I have seen the head of a beast not unlike to this, saying that if the bones whereon the horns grow should be joynted together, then would the horns be longer, and of another crooked fashion. And in the same place there is also the neckbone of the same beast, the compass thereof is at the least three *Roman* feet two palms and a half, whereunto I may also add that shoulder-blade which hangeth on the North gate of the City of *Coventry*, being in the lowest part three foot broad and two fingers, and four foot long and two palms: and the compass of the arme hole wherein the shoulder is joynted, is three foot and one palm, and the whole compass of them both in breadth and length, is eleven foot one palm and a half.

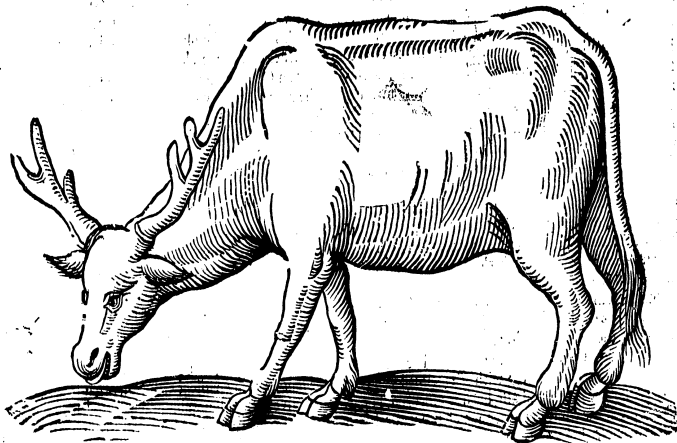
"In the Chappel of the said great *Guy*, distant from *Warwick* about one thousand paces (or a mile) there hangeth a rib of this beast (as I suppose) the compass whereof in the smallest place is three palms, and in length it is six foot and a half: the rib is dry and rotten in the supericies thereof. The vulgar people affirm, that it is the peece of a Boar, which was slain by Earl *Guy*; other say, by tradition of their elders, that it is a peece of a wilde Cow remaining neer *Coventry*, and did much harm to many people; which latter opinion I embrace, taking it for a *Bonajus*, who in most things is like a Cow, and therefore some affirm it is an *Indian* Cow (but ignorantly) because any thing that is not common is usually attributed to some strange Countrey breed (with an addition to that it moit of all resembleth.) Thus far *D. Cey*.

Whereunto I assent, holding his conjectures to be very probable, untill by the diligent industry of some other, or my own eye-sight we may deliver to the world some more assured and perfect knowledge in these kind of beasts. Exhorting in the mean season all learned men, to discover more exactly their present or future knowledge herein, to the high benefit of all them, that are diligent students in this part of Gods creation.

Of



## Of the BUFFE.



Of the name and kind of Buffe.

A Buffe is called in Greek, *Tarandos*; and in *Latine*, *Tarandus*; which some have corrupted barbarously, tearing it *Parandrus* and *Pyradus*; and I conjecture that it is the same beast, which the *Polonians* call *Tur* or *Turo*; howsoever other confound this *Tarandus* with another beast, called *Rangifer*; and some with a kinde of *Urus*, which have many properties in common with a Buffe, yet my reason, why the *Polonian Tur* can be no other then a Buffe, is, because the head and mouth differeth from those beasts; and also because this is taken in *Sarmatia*, where the common people call it *Daran*, or *Daran*; although the later Writers call it *Duran* and *Duran*, and translate it a *Bonajur*, which can by no means agree with this beast; and the name of *Daran* is easily derived from *Tarandus*, or *Tarandos*.

Also that the *Polonian Tur* should not be a Buffe, all that can be objected, is, that the horns thereof are craggy or branched, which thing *Pliny* attributeth to a Buffe: whereunto I answer, that the Ancients did confound a Buffe with an Elk, and a *Rangifer*; for in the description of an Elk they vary, divers times mistaking one for another, by reason that they wrote altogether by report, none of them being seen in their Countries, and therefore may easily be deceived in a Buffe, as well as in an Elk. The chief Authors of this opinion have been Sir *Thomas Eliot*, and *Georgius Agricola*, with whom I will not contend, nor with any other man that can give better reason: for *Pliny* maketh a Buffe to be a beast proportioned betwixt an Hart and an Oxe, of which sort is not a *Rangifer*, as shall be manifested; and if it be, yet can it never appear that a *Rangifer* doth change colour like a Buffe, as also we will make more evident: So then distinguishing a Buffe from a *Rangifer*, and presuming that the *Polonian Tur*, or *Tur*, is a Buffe; we will proceed to his description.

The head of this beast is like the head of a Hart, and his horns branched or ragged; his body for the most part like a wilde Oxe, his hair deep and harsh like a Bears, his hide is so hard and thick, that oft the *Scythians* make breast-plates, which no dart can pierce through. His colour, for the most part, like an Asse, but when he is hunted or feared, he changeth his hew into whatsoever thing he seeth; as among trees he is like them; among green boughs he seemeth green; amongst rocks of stone, he is transmutated into their colour also; as it is generally by most Writers affirmed: as *Pliny* and *Solinus* among the Ancients; *Stephanus* and *Enstatius* among the later Writers.

This indeed is the thing that seemeth most incredible, but there are two reasons which draw me to subscribe hereunto: first, because we see that the face of men and beasts through fear, joy, anger, and other passions, do quickly change; from ruddy to white, from black to pale, and from pale to ruddy again. Now as this beast hath the head of a Hart, so also hath it the face of a Hart, but in a higher degree; and therefore by secret operation it may easily alter the colour of their hair, as a passion in a reasonable man, may alter the colour of his face.

The same things are reported by *Pliny* of a beast in *India* called *Lycan*, as shall be afterward declared; and besides these two, there is no other among creatures covered with hair, that changeth colour.

*Pliny.*  
The several parts.  
*Silvius.*  
*Herodotus.*  
A mule in his colour.

colour. Another reason forcing me to yeeld hereunto is, that in the Sea a *Polypus*-fish, and in the earth among creeping things, a *Chameleon*, do also change their colour in like sort and fashion: whereunto it may be replied, that the *Chameleon* and *Polypus*-fish, are pilled or bare without hair; and therefore may more easily be verie-coloured; but it is a thing impossible in nature, for the hair to receive any tincture from the passions: but I answer, that the same nature can multiply and diminish her power in lesser and smaller Beasts, according to her pleasure, and reserveth an operation for the nails, and feathers of birds, and fins and scales of fishes, making one sort of divers colour from the other: and therefore may and doth as forcibly work in the hairs of a Buffe, as in the skin of a *Chameleon*; adding so much more force to transmute them, by how much farther off they stand from the blood, like as an Archer, which setteth his arm and bow higher to shoot farther, and therefore it is worthy observation, that as this beast hath the best defence by her skin above all other, so she hath a weakest and most timorous heart above all other.

These Buffes are bred in *Scythia*, and are therefore called *Tarandi Scythici*; they are also among the *Sarmatians*, and called *Budini*, and near *Gelonis*, and in a part of *Poland*, in the *Duchy of Mazovia*, betwixt *Oszeck* and *Garwolin*. And if the *Polonian Tur* before mentioned, have a name (whereof I am ignorant) then will I also take that beast for a kinde of *Bijon*. In *Phrygia* there is a territory called *Tarandos*, and peradventure this beast had his name from that Countrey, wherein it may be he was first discovered and made known.

The quantity of this beast, exceedeth not the quantity of a wilde Oxe, whereunto in all the parts of his body he is most like, except in his head, face, and horns: his legs and hoofs are also like an Oxe. The goodness of his hide is memorable, and desired in all the cold Countries in the world, wherein only these beasts and all other of strong thick hides are found, for the thinne and most unprofitable skins of beasts, are in the hot and warmer parts of the world: and God hath provided thick, warm, most commodious, and precious covers for those beasts that live farthest from the Sun. Whereupon many take the hides of other beasts for Buffe, for being tawed and wrought artificially they make garments of them, as it is daily to be seen in *Germany*.

The quantity of the hide of a Buffe. The hide is most profitable to man.

## Of the Vulgar BUGIL.

A Bugil is called in *Latine*, *Bubalus*; and *Buffalus*; in *French*, *Bouffe*; in *Spanish*, *Bufo*; in *German*, *Buffel*; and in the *Illyrian* tongue, *Bowol*. The *Hebrews* have no proper word for it, but names, comprehend it under *To*, which signifieth any kinde of wilde Oxe; for neither can it be expressed by *Meriab*, which signifieth fatted Oxe; or *Behemim*, which signifieth Oxe properly; or *Jachmim*, which the *Perfians* call *Kutzobi*, or *Buzobi*, and is usually translated a Wilde-*Beest*. For which beast the *Hebrews* have many words; neither have the *Grecians* any proper word for a vulgar Bugil, for *Boubatos* and *Boubatis*, are amongst them taken for a kinde of *Ree-buck*. So that this *Bubalus* was first of all some modern or barbarous term in *Affick*, taken up by the *Italians*, and attributed to this beast, and many other for whom they knew no proper names. For in the time of *Pliny*, they used to call strange beasts like Oxen or Bulls, *Viri*; as now a days (led with the same error, or rather ignorance) they call such *Bubali*, or *Buffali*. The true effigies of the vulgar Bugil, was sent unto me by *Cornelius Sittardus*, a famous Physitick in *Norimberg*; and it is pictured by a tame and familiar Bugil, such as liveth among men for labour, as it seemeth to me. For there is difference among these beasts, (as *Aristotle* hath affirmed) both in colour, mouth, horn, and strength.

This vulgar Bugil, is of a kinde of wilde Oxe, greater and taller then the ordinary Oxe, their body being thicker and stronger, and their limbs better compact together; their skin most hard, their other parts very lean, their hair short, small, and black, but little or none at all upon the tail, which is also short and small. The head hangeth downward to the earth, and is but little, being compared with the residue of his body; and his aspect or face betokeneth a tameable and simple disposition. His fore-head is broad and curled with hair, his horns more flat then round, very long, bending together at the top, as a Goats do backward: inasmuch as in *Crete*, they make bows of them: and they are not for defence of the beast, but for distinction of kinde and ornament. His neck is thick and long, and his rump or neather part of his back is lower then the residue, descending to the tail: His legs are very great, broad and strong, but shorter then the quantity of his body would seem to permit. They are very fierce being tamed, but that is corrected by putting an Iron ring through his Nostrils, wherinto is also put a cord, by which he is led and ruled, as a Horse by a bridle (for which cause in *Germany* they call a simple man over-ruled by the advice of another to his own hurt, a Bugle, led with a ring in his nose.)

His feet are cloven, and with the foremost he will dig the earth, and with the hindmost fight like a Horse, setting on his blows with great force, and redoubling them again if his object remove not. His voyce is like the voyce of an Oxe; when he is chafed he runneth forth right, seldom winding or turning, and when he is angered, he runneth into the water, wherein he covereth himself all over, except his mouth, to cool the heat of his blood; for this beast can neither endure outward cold nor inward heat: for which cause, they breed not but in hot Countries, and being at liberty are seldom from the waters. They are very tame, so that children may ride on their backs; but on a sudden they will run into the waters, and so many times indanger the childrens lives.

Afferting. The manner of his flight. Nature of their breeding places. *Pet. Cresset.*

Their



The true cry-  
mology of the  
name *Taurus*.

The Hebrews call him *Tor*, or *Taur*; which the Chaldees call *Abir*, for a strong Ox: so the *Arabians*, *Taur*; the *Grecians*, *Taurus*; the *Latins*, *Taurus*; the *Italians*, *Taur*; the *French*, *Tureau*; the *German*, *ein Stier*; ein *Vuchersstier*, das *Vucher*, ein *Mummelstier*, ein *Hagen*, and ein *Bollen*; the *Illyrians*, *Vul*, and *Imec*; by all which several appellations, it is evident, that the name *Taurus* in *Latin* is not derived from *Taurus*, the stretching out the tail; nor from *Gaurus*, signifying proud; but from the Hebrew, *Tor*; which signifieth great: upon which occasion, the *Grecians* called all large, great, and violent things, by the name of *Taurus*, and that word *Taurus* among the *Latines*, hath given denomination to Men, Stars, Mountains, Rivers, Trees, Ships, and many other things, which called *Lauchmus Camearatus* to make thereof this enigmatical riddle.

A Riddle up-  
on the word  
*Taurus*.

*Maclius erat regia: sed lignea membra sequabar.  
Et Colchum mens sum: sed sum non nomine solo.  
Et vobis in celo: sed in ipsi ambulo terra.*

That is in divers senses, *Taurus* was a Kings *Pander*, the root of a tree, a Mountain in *Cilicia*, a Bull, a Mountain in name, a Star or sign in heaven, and a River upon the earth: so also we read of *Statilius Taurus*, and *Pomponius Vitellus*, two *Romans*. It was the custom in those days, to give the names of beasts to their children, especially among the *Troglodytes*, and that *Adulterer* which ravished *Europa*, was *Taurus* the King of *Crete*: or as some say, a King that came in a Ship, whose Ensign and name was the Bull; and other affirm, that it was *Jupiter* in the likeness of a Bull, because he had so defouled *Ceres* when he begat *Proserpina*, and afterward defouled *Proserpina* his daughter, in the likeness of a Dragon. It is reported that when *Achelus* did fight with *Hercules* for *Deianira* the Daughter of *Oeneus* King of *Calydon*, finding himself to be too weak to match *Hercules*, turned himself suddenly into a Serpent, and afterward into a Bull; *Hercules* seeing him in that proportion, speedily pulled from him one of his horns, and gave it to *Copia* the companion of *Fortune*, whereof cometh that phrase of *Comusopia*. Afterward, *Achelus* gave unto *Hercules* one of the Horns of *Amalthea*, and so received his own again, and being overcome by *Hercules*, hid himself in the River of *Tibor*, which after his own name bending forth into one horn or crook, was called *Achelous*. By these things the Poets had singular intentions to decipher matters of great moment under hidden and dark Narrations.

Reasons why  
rivers are cal-  
led *Tauricani*.

But there are four reasons given, why Rivers are called *Tauricani*: that is, Bull-heads. First, because when they empty themselves into the Sea, they roar or bellow like Bulls, with the noise of their falling water. Secondly, because they furrow the earth like a draught of Oxen with a plow, and much deeper. Thirdly, because the sweetest and deepest pastures unto which these cattle resort, are near the rivers. Fourthly, because by their crooking and winding, they imitate the fashion of a horn, and also are impetuous, violent, and unreflexible.

The strength  
and several  
parts of Bulls.

The strength of the head and neck of a Bull is very great, and his fore-head seemeth to be made for fight: having horns short, but strong and piked, upon which he can toss into the air very great and weighty beasts, which he receiveth again as they fall down, doubling their elevation with renewed strength and rage, until they be utterly confounded. Their strength in all the parts of their body is great, and they use to strike backward with their heels: yet it is reported by *Calvus Titurnus* a Neat-head of *Aethiopia*, that being in the field among the cattle, took one of the most fierce and strongest Bulls in the herd by the hinder-leg, and there in despite of the Bull striving to the contrary, held him with one hand, until another Bull came by him, whom he likewise took in his other hand, and so perforce held them both: which thing being seen by *Milo Crotoniates*, he lifted up his hands to heaven, crying out by way of Interrogation to *Jupiter*, and saying: O *Jupiter*, hast thou sent another *Hercules* amongst us? Whereupon came the common proverb of a strong armed man: *This is another Hercules*. The like story is reported by *Suidas* of *Polydamas*, who first of all slew a Lyon, and after held a Bull by the leg so fast, that the beast striving to get out of his hands, left the hoof of his foot behind him.

Their several  
parts.

The *Equities* of this beast are many among Writers, as when they call him *Brazen-footed*, *wilde*, *cheatful*, *sharp*, *plover*, *warrior*, *horn-bearer*, *blockish*, *great*, *glistering*, *fierce*, *valiant*, and *louring*, which seemeth to be natural to this beast; inasmuch as the *Grammarians* derive *Tovitus*, grimmels or lowering, from *Taurus*, a Bull, whose aspect carryeth wrath and hatred in it: wherefore it is proverbially said in *Uespalia*, of a lowering and scowling countenance, *Vir sic als ein ochs der dem fleisch, uwer Entlofferist*: That is, he looketh like a Bull escaped from one stroke of the Butcher. Their horns are lesser but stronger than Oxen or Kie, for all beasts that are not gelded, have smaller horns and thicker skulls than other, but the Bulls of *Sybilias* is said elsewhere, have no horns. Their heart is full of nerves or sinews, their blood is full of small veins, for which cause he ingendereth with most speed, and it hardeneth quickly. In the gall of a Bull there is a stone called *Gues*, and in some places the gall is called *Mammifer*. They are plentiful in most Countries, as is said in the discourse of Oxen, but the best sort are in *Epirus*, next in *Thracia*, and then in *Italy*, *Syria*, *England*, *Macedonia*, *Phrygia*, and *Belgia*: for the Bulls of *Gallia* are impaired by labour, and the Bulls of *Aethiopia* are the *Rhinceros*, as the Bulls of the woods are Elephants.

Countries of  
their birth  
breed.

Their time of  
copulation.

They desire the Cow at eight months old, but they are not able to fill her till they be two years old, and they may remain tolerable for breeders until they be 12. and not past. Every Bull is sufficient for ten Kie, and the Bulls must not feed with the Kie, for two months before their leaping time,

time, and then let them come together without restraint, and give them Peate, or Barley, if their pasture be not good. The best time to suffer them with their females, is the middle of the Spring, and if the Bull be heavy, take the tayl of an Hart and burn it to powder, then moisten it in Wine, and rub therewith the genitals of a Bull, and he will rise above measure into lust: wherefore, if it be more then tolerable, it must be allayed with Oyl. The violence of a Bull in the act of copulation is so great, that if he misse the females genital entrance, he woundeth or much harmeth her in any other place; sending forth his seed without any motion except touching, and a Cow being filled by him, he will never after leap her, during the time she is with Calf: wherefore the *Egyptians* decipher by a Bull in health, without the itch of lust, a temperate continent man, and *Epictetus* saying of *Sybilie* and *Asine*; that is *Bear* and *Forbear*, was emblematically described by a Bull, having his knee bound and tied to a Cow in the hand of the Neat-herd, with this subscription. *Hard fortune is to be unkind and with patience, and happiness is often to be feared*, for *Epictetus* said, *bear and forbear; we must suffer many things, and with-hold our fingers from forbidden fruits; for so the Bull which for aye rule among beasts, being bound in his right knee, abstaineth from his female great with young*.

When they burn in lust, their wrath is most outrageous against their companions in the same pasture, with whom they agreed in former times, and then the conqueror coupleth with the Cow: but when he is weakened with generation, the beast that was overcome, setteth upon him a'reath, and oftentimes overcometh: which kinde of love-fight is elegantly described by *Oppianus*, as followeth. One that is the chiefest ruler over all the other herd, who tremble at the sight and presence of this their eager King, and especially the Kye, knowing the insulting jealousy of their raging husband. When the herds of other places meet together, beholding one another with disdainful countenances, and with their loughing terrible voices provoke each other, puffing out their flaming rage of defiance, and dimming the glittering light with their often dull-beating-feet into the air, who presently take up the challenge, and separate themselves from the company, joining together at the sound of their own trumpets-loughing voice, in fearful and sharp conflicts, not sparing, nor yielding, not retiring, till one or both of them fall wounded to the earth: sometimes turning round, sometimes holding heads together, as if they were Coach-fellows: and as two mighty ships well manned, with sufficient arms and strength, by force of winds and floods violently rushing one against another, do break and split alunder, with the horrible cry of the Souldiers, and rattling of the armour: so do these Bulls, with voice, legs, horns, and strength, like cunning and valiant Martialists, make the sounds of their blows to ring betwixt heaven and earth, until one of them be vanquished and overthrown.

The poor over-come beast, with shame retireth from the herd, and will no more appear, until he be enabled to make his party good against his triumphant adversary: then he feedeth solitary in the Woods and Mountains, for it is proverbially said, to signifie a single and unmarried life, *abini Taurus in fivum*: that is, the Bull is gone to the Wood to live solitarily without his female, often exercising himself like a studious Champion against the day of a new combat, and when he findeth his strength increased, and his courage armed for the day of battel, then roareth he in the Woods and Mountains, to provoke his adversary to answer; and perceiving his own voice to be more fierce and violent then is his enemies, forth he proceedeth like some refreshed Giant, confident in his strength, defending the lists of a second combat, where he easily overcometh the Victor, weakened with copulation, and not exercised or fitted to such a triall through fulness and vengery: so the first that was vanquished becometh Conqueror.

The very same is in other words described by *Virgil*: Bulls are enemies to all beasts that live upon prey, as Bears, Lyons, and Wolves: when they fight with Wolves, they winde their tails together, and so drive them away with their horns; when the Bear fighteth with an Ox, he falleth on her back, watching opportunity to take his horns with her fore-feet; which if he catch, with the weight of her body she wearie the beast, who is so earnest in combat with these beasts, that they will fight their tongues hanging out of their mouths. The Crow is enemy to Bulls and Affes, for in her sight she will strike at their eyes; and it is easier for the Bull to be revenged of a Lyon, then on such a bird: Red colour stirreth up a Bull to fight, neither can the Neat-herds govern these with such facility as they do the females, for when they wander and go astray, nothing can recall them but the voice of their females for copulation, which they understand and hear, being a mile or two distant.

The voice of a Bull is sharper and shriller then is the loughing of a Cow; they are most courageous that have short and thick necks, and in their greatest wideness, if their right knee can be bound, they will not stir; or if they be tied to a wide fig-tree, which is so fearful to the nature of an Ox or Bull, that it hath been seen, how a very few sticks of that wood have got a great quantity of Bulls flesh in shorter time, then a far greater number of other wood set on fire could perform: which caused the *Egyptians* in ancient time, to picture a Bull tied to a wide fig-tree, to signifie a man that changed his manners through calamity.

Out of the hides of Bulls, especially their ears, necks, and genitals is most excellent glue confected, but for the most part it is corrupted, by seething with it old leather of shoes or boots: but that of *Rhodes* is without all fraud, fit for Physicians and Painters, and evermore the whiter the better, for that which is black is good for nothing; wherefore that which is made out of Bulls hides, is so white, that it sendeth forth a brightness, whose virtuous conjunction in conglutination is so powerful, that it is easier to break a whole piece of wood then any part so gilded together therewith: and for this invention, we are (saith *Pliny*) indebted to *Peidaxus* the first author thereof. They used it in instruments of music, and such other tender and precious actions.

then to the  
protection.

*Quintilian*.

The fight  
and combat  
of Bulls.

*Georg. 3.*  
Then enemy  
to other beasts.

*Hor. Apollo 2.*  
A secret in the  
taming of a  
Bull.

*Tacitus*.



Of the gall. The gall of an Oxe put upon Copper or Brasse, maketh it glitter like Gold; for which cause it is used by Players, to colour their counterfeit Crowns. The flesh of a Bull is good for meat, but yet not so good as an Oxe or Cow; yet did the Egyptians abstain from eating Cows flesh, and not from the flesh of Bulls.

These beasts are used in some places to plow, in some to fight; and it is reported by *Aelianus*, that *Mithridates* King of *Pontus*, beside his guard of men, had also a guard of a Bull, a Horse, and a Hart, which he trained with his own hands; so that when his followers were asleep, if any stranger came near, they failed not to awake him, by one of their several voyces. It is reported also, that if the nostrils of a Bull be anointed with Oyl of Roses, he will presently lose his eye-sight: and that in the Lake *Asphittes* there can no living creature abide, yet many Bulls and Camels swim therein safely. It is but fabulous that there were Bulls in *Calicut*, which did breath out fire, except by that fiction the Poets understood the beastly rage of the rich Inhabitants. Touching the sacrificing of Bulls; it was also the custom of the old Egyptians to sacrifice a Bull unto *Epaphus*: and their manner was, first of all to try him whether it were fit for sacrifice, by laying meal before them, whereof if they refused to taste, they were adjudged not apt for the Temple.

The *Druids* call a general sacrifice *Isfume*, whereby they affirm all grievances may be cured. First they prepared a banquet with sacrifice under some tree, then brought they two white Bulls fastened together by the horns, and then they gave a drink to any barren creature, woman, or brute beast, holding religiously, that by that drink they should be made fruitful, and free from all payson: Unto to great a height did the folly of blinde people arise, to put religion in every unreasonable invention, under pretence of any good intention devised by idolatrous Priests. As often as they flew and offered a Bull, and poured Frankincense and Wine upon the hoat, they said; The Bull is increased with Frankincense and Wine: but the *Ionians* did best comfort themselves in their sacrifices, where the Bull before his death did lough at the Altar: and the *Messians* did binde their Bull which was to be sacrificed to the ghost of *Arifomene*, unto certain Pillars in his Sepulchre: if therefore the Bull did shake the pillar while he leaped to and fro to get liberty, they took it for a good sign or *Omen*, but if it stood immovable, they held it a mournful and lamentable thing.

It is likewise reported by *Varinus*, that when *Agamemnon* ignorantly killed one of the Harts of *Diana* in *Aulis*, she was so wroth, that she stayed the winds from blowing upon his Navy, so as they could not stir out of harbour: hereupon they went to the Oracle, where answer was given, that the goddes was to be pacified with some one of *Agamemnon*'s blood, therefore *Ulysses* was sent away to fetch *Iphigenia*, the daughter of *Agamemnon* from her mother *Clytemnestra*, under pretence to be married to *Achilles*; but when she was ready to be sacrificed, the goddes took pity on her, and accepted a Bull in her stead, which ought not to be thought incredible, seeing that in holy Scripture a Ram was substituted in the place of *Isaac*.

They were wont also to sacrifice a Bull to *Nephtus*, and to all the Rivers, because of that affinity which they held a Bull hath with all waters: and to *Apollo*, according to this *Virgilian* verse, *Taurum Neptuno, Taurum tibi pulcher Apollo*. But unto *Jupiter* it was unaccustomed to be offered, perhaps because he had often shewed himself in that likeness, to ravish and deflower women. There be certain Proverbs of a Bull, which are not altogether impertinent in this place. First, it is commonly said, that he may bear a Bull that hath born a Calf; whereby is meant, that he may be more subject to filthiness in age, which was so in youth. *Quarilla* was a woman of most vile reputation for uncleanness, because she said, that when she was little, she lay with little ones like her self, and when she grew bigger, she applied her self to the pleasure of elder men, growing in filthiness as she had increased in years. Likewise they were wont to say of an absurd or impossible thing; that if a Bull could reach his head over *Tageus*, he might drink of the river *Eurota*: and the beginning of this proverb, was taken of an *Apologme* of *Cerades*, when his Hoat upon a time did ask him what punishment the *Lacedaemonians* had appointed for adulterers, he answered: there was no adulterers in *Lacedaemon*, and therefore the punishment and question were frivolous. His Hoat replied; But if there should be an adulterer there, what punishment would they appoint for him? Marry (said *Cerades*) he should pay such a Bull as would reach over *Tageus* to drink of the water *Eurota*; whereas the hoat laughed, demanding where such a Bull could be found? then said *Cerades*, and where can you finde an adulterer in *Lacedaemon*? so putting off one absurdity with another. And thus much of the natures and properties of a Bull in general. In the next place before this beast be turned into the Woods, we will describe his medicinal vertues, and so let him loose.

The powder of a Bulls horn drunk in water stayeth a flux of blood, and the loofness of the belly. *Saxum* and *Euphorasium* say, that if a Bulls horn be burned in a place where Serpents abide, it driveth them away. The blood of Bulls mingled with Barley flower, driveth away hardness in the flesh, and being dried cureth Apollumies in every part of the body. It taketh away spots in the face, and killeth Serpents: It is commended warm against the Gout, especially in Horses. It is not good for to drink, because it is easily congealed, except the little veins be taken out. It is accounted among the chiefest paysons, and therefore it is thought by *Plutarch*, that *Hannibal* paysoned himself by drinking Bulls blood, being thereunto perswaded by his servant: for so dyed *Themistocles*, and *Psemmatus* King of Egypt, taken by *Cambyses*, was constrained to drink the blood of a Bull; whereupon immediately he gave up the ghost. For remedy hereof, it is good to beware of vomiting, because the blood congealed in the Stomach into lumps, stoppeth the throat; wherefore all those things which dissolve milk in the Stomach, are also medicinable against the blood of Bulls. In these cases let the party

party be first of all purged by Glycer or otherwise, and then anoynt the Stomach and belly with Barly meal and sweet Water, laying it unto them like a plaster: likewise Lupines, Oxyment, and Nitre, are sovereign in this, as all Physicians know. The dry leaves of *Neppe* and *Calamach* is profitable against this Malady; so also are ashes made of the lees of Wine burned.

The fat of a Bull is profitable to many things. First therefore, it must be plucked out warm from the reins of a Bull and washed in a River or Brook of running Water, pulling out the skins and tunicles, then melt it in a new earthen pot, having cast among it a little salt, then let it in fair cold Water, and when it beginneth to congeal, rub it up and down in the hands, wringing out the water, and letting it soke in again, untill it appear well washed; then boyl it in a pot with a little sweet Wine, and being foddin, let it stand all night: if in the morning it favour strong, then pour in more Wine, seeke it again, untill that favour cease, and so all the payson be removed: and beware of Salt in it, especially if it be to be used in diseases, whereunto Salt is an enemy, but being thus used, it looketh very white: after the same manner may be used the fat of Lions, Leopards, Panthers, Camels, Boars, and Horses.

The fat kall about the guts melted in a frying pan, and anoynted upon the genitals and breall, helpeth the *Dysenterie*. The marrow of a Bull beaten and drunk, cureth the pain in the linal of the belly; and *Astus* saith, that if it be melted at a fire, and mingled with one fourth part of Myrrhe and Oyl of Bays, and the hands and feet be therewith anointed and rubbed, morning and evening; it helpeth the contractions of the Nerves and Sineus.

The fat of a Dormouse, of a Hen, and the marrow of a Bull, melted together, and poured warm into the ears, easech their pain very much: and if the liver of a Bull be broyled on a soft fire, and put into ones mouth that hath the Tooth-ach, the pain will go away so soon as ever the teeth touch it. The gall of a Bull is sharper then an Oxe, and it is mingled with Hony for a Wound-plaster, and in all outward remedies against payson. It hath also a quality to gnaw the deadness or corruption out of Wounds, and with the juyce of Leeks and the Milk of women, it is applied against the Swine-pox, and Fittulaes; but the gall alone rubbed upon the biting of an Ape, cureth that Malady. Likewise the Ulcers in the head, both of men, women, and children. And if the wool of an Hare be burned to ashes, and mingled with oyl of Myrrhes, Bulls gall, and beaten Aloome, and so warmed and anoynted upon the head, it stayeth the falling away of the hair of head.

With the gall of a Bull, and the white of an Egge, they make an Eye-salve, and so anoynt therewith dissolved in water four days together: but it is thought to be better with Hony and Balsam: and infused with sweet new Wine into the Ears; it helpeth away the pains of them, especially running-mattery Ears, with Womans or Goats milk. It being taken with Hony into the mouth, helpeth the clufts and sores therein; and taken with the Water of new *Colopimnia* and given to a woman in travel, causeth an easie childe-birth. *Galen* was wont to give of a Bulls gall the quantity of an Almond, with two Spoonfulls of Wine, called *Vinum Lymphatum* to a woman that hath her childe dead within her body, which would presently cause the dead Embryon to come forth. The genital of a red Bull, dried to powder, and drunk of a woman, to the quantity of a golden Noble, it maketh her to loath all manner of copulation: but in men (as the later Physicians affirm) it causeth that desire of lust to increase. The dung of a Bull laid to warm, helpeth all hardness; and burnt to powder, helpeth the member that is burnt. The urine or stale of Bulls with a little Nitre taketh away Scabs and Leprosie.

### Of another Beast called BUSELAPHUS.

There was (saith *D. Cas*) a cloven-footed beast brought out of the Deserts of *Mauritania* into England, of the bigness of a Hinde, in form and countenance betwixt a Hinde and a Cow, and therefore for the resemblance it beareth of both, I will call it *Buselaphus*, or *Bucivervus*, or *Mischelaphus*, or a Cow-Hart: having a long and thin head and ear, a lean and slender leg and shin, so that it may seem to be made for chafe and celerity. His tail not much longer then a foot, but the form thereof very like a Cows, and the length like a Harts; as if nature seemed to doubt whether it should encline to a Cow or a Hart: his upper parts were yellowish and smooth, his neither parts black and rough; the hair of his body betwixt yellow and red, falling close to the skin, but in his fore-head standing up like a Star; and so also about the horns which were black, and at the top smooth, but downward rough with wrinkles meeting on the contrary part, and on the neerer side spreading from one another, twice or thrice their quantity. These horns are in length one foot and a hand-breadth, but three hands-breadth thick at the root, and their distance at the root was not above one fingers breadth, so arising to their middle, and a little beyond where they differ or grow asunder three hands breadth and a half; then yeeld they together again a little, and so with another crook depart asunder the second time, yet so, as the tops of the horns do not stand asunder above two hands-breadth, three fingers and a half. From the crown of the head to the nostrils, there goeth a black stroke which is one foot, two palms and one finger long, in breadth above the eyes where it is broadest, it is seven fingers, in thickness one foot and three palms, it hath eight teeth, and wanteth the uppermost like a Cow, and yet cheweth the Cud, it hath two udders under the belly like a Heifer that never had a Calf, it is a gentle and pleasant beast, apt to play and sport, being not only swift to run, but light and active to leap: It will eat any thing, either bread, broth, salted or powdered beef, grass or herbs, and the use hereof being alive is for hunting, and being dead the flesh is sweet and pleasant for meat.

The description of this strange beast. The name. The several parts.

*Parasensis.*

Of the OXE and COW.



WE are now to describe those beasts which are less foreign and strange, and more commonly known to all Nations, than any other four-footed beast: for howsoever Bugles, Buffes, Lyons, Bears, Tigers, Beavers, Porcupines and such other, are not always found in every Nation, yet for the most

most part are Oxen, Kine, Bulls and Horses, by the Providence of Almighty God, disseminated in all the habitable places of the world: and to speak the truth, Oxen and Horses were the first riches, and such things wherein our Elders got the first property, long before houses and lands: with them they rewarded men of highest desert, as *Melampus*, who opened an Oracle to *Telemus* that sought out the lost Oxen of *Iphiclus*. And *Erix* King of *Sicily*, so much loved Oxen, that *Hercules* recovered from *Gryon*; that when he was to contend with *Hercules* about these, he rather yielded to depart from his Kingdom than from his Cattel: and *Julius Polus* affirmeth, that there was an ancient coin of mony, which was stamped with the figure of an Oxe, and therefore the Crier in every publick spectacle made proclamation, that he which deserved well, should be rewarded with an Oxe, (meaning a piece of mony having that impress upon it: which was a piece of Gold compared in value to an *English* Rose-noble) and in my opinion the first name of mony among the *Latins* is derived from Cattel, for I cannot invent any more probable etymologie of *Pecunia*, then from *Pe-* *Pliny*, *cus*, signifying all manner of Cattel: howsoever it is related by some Writers, that on the one side of their coin was the Kings face, and on the other an Oxe picture; and that *Servius* was the first that ever figured money with Sheep or Oxen. *Miron* the great painter of *Eleuthera*, and disciple of *Agelaus*, made an Heifer or Cow of Brals, which all Poets of *Greece* have celebrated in sundry Epigrams, because a Calf came unto it to suck it; being deceived with the proportion, and *Asymilus* also added this following unto the said Calf and Cow, saying:

*Ubera quid pulsat frugimenta matris abena,*  
*Q vitula? & succum lactis ab ea petit?*

Whereunto the brazen Cow is caused to make this answer following:

*Hunc quoque praestarem, si me pro parte parisset,*  
*Exterius Miron, interiori Deum.*

Whereby he derideth their vain labours, which endeavour to satisfie themselves upon mens deviles, which are cold and comfortless without the blessing of Almighty God. To begin therefore with these beasts, it must be first of all remembered, that the name *Bos*, or an Oxe as we say in *English*, is the most vulgar and ordinary name for Bugles, Bulls, Cows, Buffes, and all great cloven-footed horned beasts; although in proper speech it signifieth a beast gelded or libbed of his itones: and *Bos* signifieth a huge great Serpent whereof there were one found in *Italy*, that had swallowed a child whole without breaking one of his bones, observing also in Oxen the distinction of years or age: which giveth them several names, for in their young age they are called Calves, in their second age Steeres, in their third Oxen, and the *Latins* adde also a fourth, which they call *Vitulus*, old Oxen. These are also distinguished in sex, the Male Calf is *Vitulus*, the Female *Vitula*; likewise *Juvenis*, a Steer, and *Juvena*, an Heifer, *Bos*, an Oxe, and *Vacca*, a Cow; *Taurus*, a Bull; *Taura*, a barren Cow; and *Horda*, a bearing and fruitful Cow: of whom the *Romans* observed certain festival days called *Hordacalia*, wherein they sacrificed those Cattel. The *Latins* have also *Vacula* and *Bucula* for a little Cow:

*Vacula non nunquam secretis bubulis ceptans, Virg.*

And again,

*Ant Bucula Celam.*

And *Bucalus* or *Bos novellus* for a little Oxe. *Schor* in the *Hebrew* signifieth a Bull or Oxe, *Baker*, Herds, or a Cow. *Thor* in the *Chaldee* hath the same signification with *Schor*, and among the later Writers you may finde *Tora* a masculine, and *Torata* a feminine, for a Bull and a Cow, accustomed to be handled for labour. The *Gracians* call them *Bous* and *Boes*, the *Arabians*, *Bakar*: and it is to be noted, that the holy Scriptures distinguish betwixt *Tzon*, signifying Rocks of Sheep and Goats, and *Baker* for Herds of Cattel and Neat: and *Maria* is taken for Bugles, or the greater Oxen, or rather for fatted Oxen, for the verb *Morab* signifieth to feed fat. *Egla* is interpreted Jer. 46. for a young Cow; and the *Persians*, *Gajalai*: It is very probable that the *Latine* *Vacca*, is derived from the *Hebrew*, *Bakar*, as the *Sarcen* word, *Baccara*; so in *Hebrew*, *Para* is a Cow, and *Par*, a Steer, and *Ben Baker*, the son of an Oxe, or Calf: and whereas the *Hebrews* take *Parim*, for Oxen in general, the *Chaldee* translate it *Tore*; the *Arabs*, *Bakera*; the *Persians*, *Nadgacab*, or *Madagacaba*; the *Italians*, call it *Bue*; the *French*, *Bœuf*; the *Spaniards*, *Buey*; the *German*, *Ochs*, and *Rind*; the *Illyrians*, *Wall*. The *Italians* call a Cow *Vacca* at this day; the *Grecians*, *Bubalis*, and *Damalis*, or *Damalai*; (for a Cow which never was covered with a Bull, or tamed with a yoke) and *Agelala*. The *French*, *Vache*; the *Spaniard*, *Vaca*; the *German*, *Ku*, or *Kube*; and the Citizens of *Alpine*, *Ceva*: from which the *English* word Cow seemeth to be derived; the *Latine* word is, a young Heifer, which hath ceased to be a Calf.

There are Oxen in most part of the world, which differ in quantity, nature, and manner, one from another, and therefore do require a several Trade. And first, their Oxen of *Italy* are most famous, for as much as some learned men have affirmed, that the name *Italia*, was first of all derived of the *Greek* word *Italos*, signifying Oxen; because of the abundance bred and nourished in those parts, and the great account the ancient *Romans* made hereof, appeareth by notable example of punishment, who banished a certain Country man for killing an Oxe in his rage, and denying that he eat thereof, as if he had killed a man: likewise in *Italy* their Oxen are not all

alike, for they of *Campania* are for the most part white and slender, yet able to manure the Country wherein they are bred; they of *Umbria* are of great bodies, yet white and red coloured. In *Ettruria* and *Latium*, they are very compact and well set or made, strong for labour, but the most strong are those of *Apennine*, although they appear not to the eye very beautiful.

The Egyptians which dwell about *Nilus* have Oxen as white as snow, and of exceeding high and great stature, (greater then the Oxen of *Grecia*) yet so meek and gentle, that they are easily ruled and governed by men. The *Arabians* are of divers colours, intermingled one within another, having a whole round boof like a horse, and but one horn growing out of the middle of their forehead.

The domestical or tame Oxen of *Africk* are so small, that one would take them for Calves of two years old; the *Africans* (saith *Strabo*) which dwell betwixt *Gethia* and our Coast or Country, have Oxen and Horses which have longer lips and hoofs then other, and by the *Grecians* are termed *Myroglatrieri*.

The *Armenian* Oxen have two horns, but winding and crooking to and fro like Ivie which cleaveth to Oaks, which are of such exceeding hardens that they will blunt any sword that is stroke upon them, without receiving any impression or cut thereby. Some are of opinion, that the only excellent breed of Cattel is in *Babilonia*, near the City *Tanagra* (called once *Pamandra*) by reason of their famous Cattel, the which Oxen are called *Coprophaga*, by reason that they will eat the dung of man; so also do the Oxen of *Cyprus*, to ease the pains of their small guts. The *Caricians* in a part of *Asia* are not pleasant to behold, having shaggy hair, and bunches on either shoulders, reaching or swelling to their necks; but those which are either white, or black, are refuted for labour.

*Egyptus*. *Egyptus* yieldeth also very great and large Oxen, which the inhabitants call *Pyrrici*, because that their first stock or feminary were kept by King *Pyrrhus*: howsoever other say, that they have their name of their fiery flaming colour: they are also called *Larani* of a Village *Larinum*, or of *Larinus*, a chief Neat-herd: of whom *Alibiens* maketh mention, who received this great breed of Cattel of *Hercules* when he returned from the slaughter of *Geryon*: who reigned about *Ambrocia* and *Ampholochi*, where through the fatness of the earth and goodness of the Pasture they grow to so great a stature. Other call them *Cefirini*, I know not for what cause, yet it may be probable that they are called *Larini*, by reason of their broad Nostrils, for *Rines* in *Greek* signifieth Nostrils: but the true cause of their great body and stature is, because that neither sex were suffered to couple one with another, until they were four years old at the least, and therefore they were called *Alauri*, and *Setauri*, and they were the proper goods of the Kings: neither could they live in any other place but in *Egyptus*, by reason that the whole Country is full of sweet and deep pastures.

All the Oxen in *India* are white at the time of their Calving, and for this cause the Poets call that Country *Argemem*. If that Oxen or Swine be transported, or brought into *Hispaula*, they grow so great, that the Oxen have been taken for Elephants, and their Swine for Mules, but I take this relation to be hyperbolical.

There are Oxen in *India* which will eat flesh like Wolves, and have but one horn, and whole hoofs; some also have three horns; there be other as high as Camels, and their horns four foot broad. There was a horn brought out of *India* to *Ptolemy* the second, which received three *Amphoras* of water, amounting the least to thirty English gallons of wine measure; whereby it may be conjectured of how great quantity is the beast that bare it. The *Indians*, both Kings and people, make no small reckoning of these beasts, (I mean their vulgar Oxen) for they are most swift in course, and will run a race as fast as any horse, so that in their course you cannot know an Ox from a Horse, waging both gold and silver upon their heads; and the Kings themselves are so much delighted with this pastime, that they follow in their Wagons, and will with their own mouths and hands provoke the beasts to run more speedily: and herein the Ox exceedeth a Horse, because he will not accomplish his race with sufficient celerity, except his rider draw blood from his sides with the spur, but the Oxer rider need not to lay any hands or pricks at all upon him, his only ambitious nature of overcoming (carrying him more swiftly then all the rods or spurs of the world could prevail on him). And of this game, the lowest of the people also are very greedy, laying many wagers, making many matches, and adventuring much time and price to see their event.

Among the *Indians* there are also other Oxen which are not much greater then great Goats, who likewise in their yokes are accustomed to run many races, which they performe with as great speed as a *Gethian* Horse; and all these Oxen must be understood to be wilde Oxen.

There be Oxen in *Levithia* (which *Aristotle* affirmeth) have their ears and horns growing both together forth of one stem. The Oxen of the *Garamanti*, and all other Neat among them, feed with their necks doubled backward, for by reason of their long and hanging horns, they cannot eat their meat, holding their heads directly straight. The self same is reported of the beasts of *Tropolytie*; in other things they differ not from other Oxen, save only in the hardens of their skin, and these Oxen are called *Opisthomi*.

In the Province of *Bangala*, are Oxen (saith *Paulus Venetus*) which equal the Elephant in height. The Oxen in *Mysia* have no horns, which other affirm also of the *Scythians*, whereof they assign this reason,

reason, because the universal bone of the skull hath no commissure or joint opened, and cannot receive any humour flowing unto it, by reason of the hardens of the skull, and the veins belonging to this bone are weaker and smaller then in other, for which afflicty they are more unfit to convey nourishment to the place; and so the neck of these beasts must needs be those dry and waste strong, because the veins are very little. The Oxen have bunches growing on their backs like Camels, and upon them do they bear their burdens, being taught by children of discipline to bend on their knee to receive their load.

Among the *Nomades* (which winter their Cattel about the Mountains of *Macedonia*) there are also certain Cattel without horns; whereof some are so naturally, the others have their horns sawed off, as soon as they grow forth, because of all the parts of their body, they only can endure no cold.

There be Oxen in *Phrygia* and *Erythraea* which are of a flaming red colour, of a very high and winding neck, their horns are not like any other in the world, for they are moved with their ears turning in afflexible manner sometime one way and sometime another.

The *Syrian* Oxen called *Bar* are of great strength, having a broad forehead, strong horns, and fearful or courageous aspect, being neither too fat or too lean of their bodies; and they are used both for war and also for running.

The Oxen of the *Belgian* Provinces, especially *Frisland* and *Holland*, are also of very great stature, for it hath been found by good experience, that one of them hath weighed sixteen hundred pounds Troy weight; and when the Earl of *Hochstare* was at *Mablinck* in *Frisland*, there was presented unto him a great Ox, which being killed, weighed above two thousand five hundred twenty and eight pound. The thing which being so strange as this he had not been beforetime observed to, the intent that succeeding ages might not misfrut such a memorable report, the said Earl caused the full picture of the said Ox, to be set up in his Palace, with an inscription of the day and year when this Ox was delivered and killed.

## OF COWES.

HAVING thus noted briefly the Countries wherein Oxen are bred and nourished, with their several kinds; it must be also observed, that Kine or Cowes which are the female of this kind, are likewise found in all the places abroad with correspondent and sensible quantities, qualities, numbers, parts, and other accidents to such creatures appertaining; excepted always those things which belong to their sex, which principally concern their milk. And first of all the Kine of most plentiful Milk in all Italy, are about *Alina* a City of the *Venetians*, near *Aquileia*, Milk of Kine which Kine are of the smallest body, and yet the greatest labourers, who are not yoked or coupled together by their necks as in other Countries, but only by their heads.

The Cowes of *Arabia* have the most beautiful horns, by reason of abundance of humours Arabian which flow to them, feeding them continually with such generous liquor as naturally doth encrease them.

The *Pyrrhean* Kine are not admitted to the Bull till they be four year old at the least, which thing *Pyrrhus* caused them to grow to a very high and tall stature: whereof there were ever four hundred kept for Cowes, the Kings store.

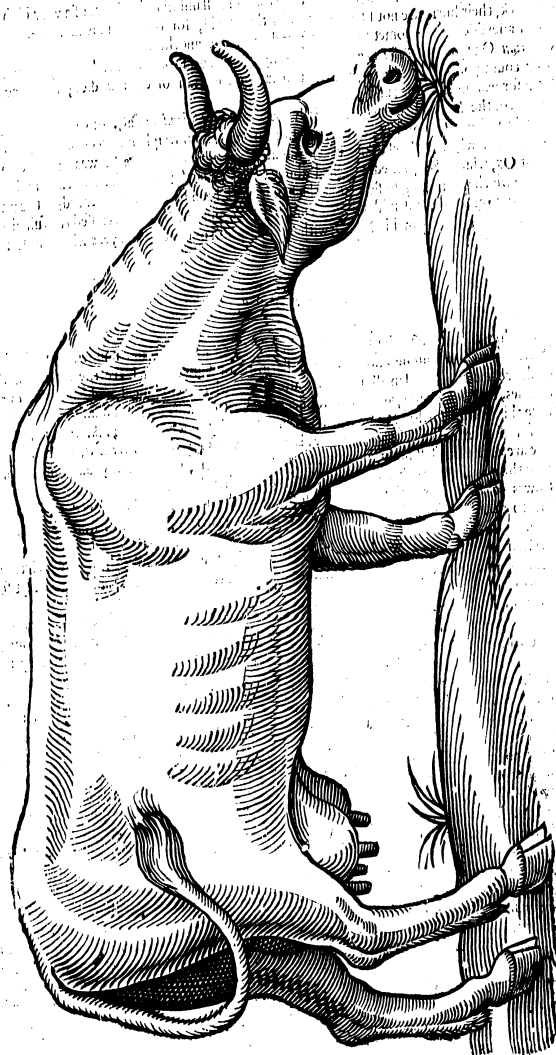
These Kine do give at any time seven or eight gallons of Milk, of Wine measure, and they are so tall, that the person which milke them must stand upright, or else stoop very little: neither ought this seem incredible, for it is evident that the Cowes of the *Phenicians* were so high, that a very tall man could not milke them except he stood upon a footstool.

The manner is in *Germany* and *Helvetia*, that about *April* some take Kie to hire, which have none of their own, and other buy Kie to farme them out to other; and the common price of a Cow for six months is payed in Butter, and is rated at seventy five pounds, twelve ounces to the pound; which payment is due to the owner, or money to that value. Other again, buy Kie and let them forth to farm, reserving the Calf to themselves; and if by the negligence of the Cowherd or farmer of them, the Cow cast the Calf, then is the hirer bound to answer the value, but if it miscarry without his negligence (as oftentimes they may) then is the losse equal to the Lactation or Farming. Yet it is good, that the Kie of greatest bodies, are not always best or most plentiful in Milk; for the Cowes or Cows of *Alina* in Italy, are of little bodies, but yet very full of Milk.

The principal benefit of Cowes Milk is for making of Butter, for the Milk it self, the Cheese and Whey, are not so fit for nourishment of man, as are those of Sheep; and the reason is, because the Milk of Kie is fattest of all other, and therefore the name of Butter, which is in *Greek*, *Butyron* and *Butyron*, and *Butyron* in *Latin*, is derived properly from this kinde of Cattel. The Cow-herds do also for their profit, observe the pasture and food, which doth above other multiply Milk; and therefore they give their Kie *Trifolium*, or Three-leaved grasse; and *Medica*, (which is a kinde of Claver grasse) *Vetches*, *Pulse*, and Beans, for Beans have great virtue to multiply Milk; likewise I have been bundles of Hemlock, or an herb much like unto it, (which we call Hart tongue) given to milch Kie.

Palladium.

There is an herb much like Crow-foot, called of the *German*, *Butterblumen*, and in *English*, *Butter-flower*, which is used to colour Butter, for thereby is the whiteness thereof taken away; they will not eat *Wal-wort* or *night-shade* (commonly called *Deaths herb*) but if they eat herbs whereupon falleth an *Hony-dew*, then will their Milk be wonderful sweet and plentiful: there is no food so good for *Cowes*, as that which is green; if the *Countrey* will afford it; especially *Kie love* the wet and watery places, although the Butter coming from the milk of such beasts is not so whole some as that which is made of such as are feed in dryer Pastures. The like care is had of their drink, for although they love the coldest and clearest waters, yet about their time of Calving it is much for better them to have warmer waters, and therefore the *Lakes* which are heated and made to some by the rain, are most wholesome to them, and do greatly help to ease their burden and pains in that business.



Paujanus

*Paujan* is reported a wonder in nature, of the Rivers *Milchus* and *Charadus*, running through the City *Pute*, that all the *Kie* which drink of them in the Spring time, do for the most part bring forth males, wherefore their herdmen avoid those places at that time. *Kie* for the most part before their Calving, are dry and without milk (especially about *Totona*). They are also purged of their menstria in greater measure, then either *Goats* or *Sheep*, which especially come from them a little before or after they have been with the Bull; howsoever *Arifole* saith, that they come from them after they have been five moneths with *Calf*, and are discerned by their urine; for the urine of a *Cow* is the thinnest of all other.

These beasts are very lustful, and do most eagerly desire the company of their male, which if they have not within the space of three hours after they mouen for it, their lust awageth till another time. In a Village of *Egypt* called *Schufa* (under the government of the *Hemphur*) they worship *Venus* under the title *Urania* in the shape of a *Cow*, persuading themselves that there is great affinity betwixt the Goddess and this beast; for by her mournful voice she giveth notice of her love, who receiveth the token many times a mile or two off, and so presently runneth to accomplish the lust of nature: and for this cause do the *Egyptians* picture *Iris* with a *Cow's* horns, and likewise a Bull to signify hearing. The signs of their Bulling (as it is termed) are their cries, and disorderly forsaking their fellows, and resisting the government of their keeper. Likewise, their secret hangeth forth more then at other times, and they will leap upon their fellows as if they were males: besides after the manner of *Mares*, they oftner make water then at other times.

The most cunning herdmen have means to provoke them to desire the Bull, if they be slack, so first of all they withdraw from them some part of their meat (if they be fat) for that will make them fitter to conceive; then take they the genitals of a Bull, and hold it to their nose, by smelling whereof they are provoked to desire copulation; and if that prevail not, then take they the tenderest part of *Shrimps*, which is their fish, and beat them in water till they be an ointment, and therewith anoint the breasts of the *Cow*, after they have been well washed, until it work upon her. And some affirm, that the tail of an *Eel* put into her hath the same virtue; other attribute much force to the wilde willow, to procure lust and conception.

They are a great while in copulation, and some have ghesped by certain signs at the time of copulation, whether the *Calf* prove male or female; for say they, if the Bull leap down on the right side of the *Cow*, it will be a male, if on the left, it will be a female: which conjecture is no longer true, then when the *Cow* admitteth but one Bull, and conceiveth at the first conjunction, for which cause the *Egyptians* decipher a woman bringing forth a maiden child; by a Bull, looking to the left hand, and likewise bearing a man child, by a Bull, looking to the right hand.

They are not to be admitted to copulation before they be two year old at the least, or if it may be four; yet it hath been seen, that a Heifer of a year old hath conceived, and that another, of four moneths old hath likewise desired the Bull; but this was taken for a monster, and the other never thrived.

One Bull is sufficient for fifteen *Kie*, although *Varro* saith, that he had but two Bulls for threecore and ten *Kie*; and one of them was two year old, the other one. The best time for their copulation is about the time of the *Daulphins* appearance, and so continueth for two or three and forty daies, which is about *June* and *July*, for those which conceive at that time, will bring forth their young ones in a most temperate time of the year; and it hath been observed, that an *Ox* immediately after his gelding, before he had forgotten his former desire and inclination, his feed not dried up, hath filled a *Cow*, and she proved with *Calf*.

They go with *Calf* ten moneths, except eighteen or twenty daies; but those which are Calved before that time, cannot live; and a *Cow* may bear every year (if the *Countrey* wherein she liveth be full of grasse, and the *Calf* taken away from her at fifteen daies old).

And if a man desire that the *Calf* should be a male, then let him tie the right stone of the Bull at the time of copulation; and for a female bind the left. Others work this by natural observation; for when they would have a male, they let their *Cattel* couple when the North wind bloweth; and when a female, they put them together when the air is Southerly. They live not above fifteen years, and thereof ten times they may ingender. The best time to Calve in, is *April*, because then the Spring bringeth on grasse, both for themselves, and to increase milk for the young ones.

They bear not but in their right side, although they have twins in their belly, which happeneth very seldom, and the beast immediately after her delivery, must be nourished with some good mear, for except she be well fed, she will forsake her young to provide for her self: therefore it is requisite to give her *Verches*, *Millet*-seed, and milk mingled with water, and scorched *Corn*; and unto the *Calves* themselves, dried *Millet* in milk in the manner of a mash: and the *Kie* must also be kept up in stables, so as they may not touch their meat at the going forth, for they are quickly brought to forsake and loath that which is continually before them: and it is observed that when *Kie* in the Summer time do in greater number above custom go to the Bull then at other times, it betokeneth and foresheweth a wet and rainy winter, for it cannot be (saith *Albertus*) thus a beast so dry as is a *Cow*, can be increased in moisture, which stirreth up the desire of procreation, except also there be a mutation in the air unto abundance of moisture. And to conclude, this discourse of a *Cow*, in ancient time they were wont to call light women *Heifers*, *Hazlots*, and *Kine*, by reason of

Signes of a Cows desire to the Bull.

Secrets to provoke lust in a Cattel.

C. H. H. H.

Signes at the copulation to know whether the Calf will be Male or Female.

Arifole.

Means to cause the Calf, at the time of copulation to be either male or female. The length of their age.

A secret in copulation.





and Cattel, if thou wilt perform that unto them which belongeth to thee, be good to this wine beneath, be good to this my sacrifice: Afterward the party washed his hands, and then drank the wine saying, *O Jupiter Dupatis*, be good to this my sacrifice, be good to this inferior wine, and if thou wilt, give part thereof to *Vesta*: the sacrifice being ended he took Millet-seed, Lentils, Oxipatum, and Garlick: *Thou far Cato*; wherewith if any Reader be offended, let him remember to pity such poor remedies, and commend his Cattel to the true God, that saveth man and beast. The *Druid's* of the *Gauls*, called a certain herb growing in moist places *Samolus*; which being gathered by the left hand of them that were fasting, they gave it for an Antidote to Oxen and Swine. And *Galen* telleth of another superfluous cure for Oxen, when a man took the horn of a Hart, and layed it upon the Chappel of *Pan*, and set upon it a burning Candle, which must not be forgotten, but alway thought upon in the day time, calling upon holy *Demusaris*, which foolish people have thought as it were by a witchcraft, to cure the evils of their Cattel.

The discovery  
of the sickness  
of Cattel, and  
the particular  
cure thereof.

But to let passe these and such like trifles, let us follow a more perfect description and rule to cure all manner of diseases in this Cattel, whose safeguard and health next to a mans, is to be preferred above all other: and first of all the means whereby their sickness is discovered may be considered, as all Lassitude or wearisomeness through overmuch labour, which appeareth by forbearing their meat, or eating after another fashion then they are wont, or by their often lying down, or else by holding out their tongue, all which and many more signes of their diseases, are manifest to them that have observed them in the time of their health; and on the other side it is manifest, that the health of an Ox may be known by his agility, life and stirring, when they are lightly touched or pricked, starting, and holding their ears upright, fullness of their belly, and many other ways.

There be also herbs which increase in Cattel divers diseases, as herbs bedewed with Hony bringeth the Murrain, the juice of black *Chamelen* killeth young Kie like the Chine, black *Hellebore*, *Aconitum*, or Wolf-bane, which is that grasse in *Cilicia*, which inflameth Oxen, herb Henry, and others. It is also reported by *Aristotle*, that in a piece of *Thracia*, not far from that City which is called the City of *Medea*, there is a place almost thirty furlongs in length, where naturally groweth a kind of Barley, which is good for men, but pernicious for beasts. The like may be said of *Argolabros*, *Orbanche* and *Asfur*, but I will hasten to the particular description of their diseases.

The diseases  
which infect  
Oxen & Kie.

In the first place is the *Malis* or *Glanders* already spoken of in the story of the Asse, which may be known by these signes, the Oxes hair will be rough and hard, his eyes and neck hang down, matter running out of the nose, his pace heavy, chewing his cud little, his backbone sharp, and his meat loathsome unto him; for remedy hereof take Sea-onions or Garlick, Lupines or Cipres, or else the foam of oil. And if a beast eat Hogs dung, they presently fall sick of the Pestilence, which infecteth the herbs and grasse they breath on, the waters whereof they drink, and the stals and lodgings wherein they lie. The humors which annoy the body of Oxen are many, the first is a moist one called *Malis*, issuing at the nose, the second a dry one when nothing appeareth outwardly, only the beast forsaeketh his meat, the third an articular, when the fore or hinder legs of the beast halt, and yet the hoofs appear sound, the fourth is *Farcinimor*, wherein the whole body breaketh forth into mattry bunches and biles, and appear healed till they break forth in other places, the fifth *Subtercutaneus*, when under the skin there runneth a humour that breaketh forth in many places of the body; the sixth a *Subrenal*, when the hinder legs halt by reason of some pain in the loins, the seventh a Maungie or Leprosie, and lastly a madness or Phrenie, all which are contagious, and if once they enter into a herd, they will infect every beast if they be not separated from the sick, and speedily remedy obtained.

The remedies against the last seven are thus described by *Columella*. First take *Oxipatum* and feathery roots mingled with Fennel-seed and meal of beaten wheat rath-ripe; put them in spring water warmed with hony nine spoonfuls at a time, and with that medicine anoint the breast of the beast, then take the blood of a Sea-snail, and for want thereof a common Snail, and put it into wine, and give the beast at his nose, and it hath been approved to work effectually. It is not good at any time to stir up Oxen to running, for chafing will either move them to looseness of the belly, or drive them into a Fever: now the signes of a Fever are these, an immoderate heat over the whole body, especially about the mouth, tongue and eares, tears falling out of the eyes, hollownes of their eyes, a heavy and drooping drowzie head, matter running out of his nose, a hot and difficult breath, and sometime fighting and violent beating of his veins and loathing of meat: for remedy whereof, let the beast fast one whole day, then let him be let blood under the tail fasting, and afterward make him a drink of bole-wort stalks sod with oil and liquor of fish sause, and so let him drink it for five daies together before he eat meat; afterward let him eat the tops of Lentils, and young small Vine branches, then keep his nose and mouth clean with a sponge, and give him cold water to drink three times a day, for the best means of recovery are cold meats and drinks, neither must the beast be turned out of doors, till he be recovered: When an Ox is sick of a cold, give him black wine, and it will presently help him.

If an Ox in his meat talk of hens dung, his belly will presently be tormented, and swell up to death if remedy be not given; for this malady, take three ounces of parley seed, a pinte and a half of Cummin, two pounds of hony, beat these together and put it down his throat warme, then drive the beast up and down, as long as he can stand, then let as many as can stand about him

rub

rub his belly, untill the medicine work to purgation: and *Vegetius* addeth, that the ashes of Elme wood well sod in oil, and put down the beasts throat, cureth the inflammation of hen-dung. If at any time it happen, that an Ox get into his mouth and throat a horse-leech, which at the first will take fait hold, and suck the place the holds (be it mouth or throat) till he have kild the beast; if you cannot take hold on her with the hand, then put into the Oxes throat a Cane, or litle hollow pipe, even to the place where the Leech sucketh, and into that pipe put warm oil, which as soon as the Leech feeleth, she presently leaveth hold.

It fortuneth sometimes that an Ox is stung or bitten with a Serpent, Adder, Viper, or other such venomous beast; for that wound take sharp Trioly, which groweth in rockie places, strain out the juice and beat it with salt, then scarifie the wound with that ointment, till it be wrought in. If a field-mouse bite an Ox, so as the dint of her teeth appear, then take a little Cummin or soft Pitch, and with that make a plaister for the wound: or if you can get another field-mouse, put her into oil, and there let it remain till the members of it be almost rotten, then bruise it and lay it to the fore; and the same body shall cure, whose nature gave the wound. Oxen are also much troubled with a disease called the Hide-bond; for remedy whereof, when the beast is taken from his work, and panteth, then let him be sprinkled over with wine, and put pieces of fat into his mouth: if then you perceive no amendment, then seeke some Laurel, and therewith heat his back, and afterward with oil and wine scarifie him all over, plucking his skin up from the ribs, and this must be done in the sunshine, or else in a very warme place.

For the scabs, take the juice of Garlick, and rub the beast all over; and with this medicaine may the biting of a Wolf or a mad Dog be cured: although other affirm, that the hoof of any beast with Brimstone, Oil, Water and Vinegar, is a more present remedy; but there is no better thing then Butter and stale Urine: When they are vexed with wormes, poure cold water upon them, afterward anoint them with the juice of onions mingled with Sals.

If an Ox be wrinched and strained in his sinews, in travel or labour, by slumping on any root or hard sharp thing, then let the contrary foot or leg be let blood, if the sinews swell: If his neck swell, let him blood, or if his neck be winding or weak (as if it were broken) then let him blood in that ear to which side the head bendeth. When their necks be bald, grinde two tile together, a new one and an old, and when the yolk is taken off, cast the powder upon their necks, and afterward oil, and so with a little rest the hair will come again.

When an Ox hangeth down his eares and eateth not his meat, he is troubled with a *Cephalalgie*; that is, a pain in his head: for which, seeke Thyme in Wine, with Salt and Garlick, and therewith rub his tongue a good space: also raw Barly steeped in Wine, helpeth this disease. Sometime an Ox is troubled with madness, for which men burn them betwix the horns in the forehead till they bleed: sometime there is a Flie which biting them continually, driveth them into madnes; for which they are wont to cast Brimstone and bay springs sod in water in the Pastures where they feed, but I know not what good can come thereby. When Oxen are troubled with fleam, put a sprig of black *Hellebore* through their eares wherein let it remain till the next day at the same hour. All the evils of the eyes are for the most part cured by infusion of Hony, and some mingle therewith *Ammoniac*, Salt and *Boetick*. When the palat or roof of their mouth is so swelled that the beast forsaeketh meat, and bendeth on the one side. let his mouth be paired with a sharpe instrument, or else burned or abraded some other way, giving them green and soft meat till the tender fore be cured: but when the cheeks swell, for remedy whereof they fell them away to the Butcher for slaughter: it falleth out very often that there grow certain bunches on their tongues, which make them forsake their meat, and for this thing they cut the tongue, and afterward rub the wound with Garlick and Salt, till all the fleamy matter issue forth.

When their veins in their cheeks and chaps swell out into ulcers, they soften and wash them with Vinegar and Lees, till they be cured. When they are liver-sick, they give them *Rubarbe*, *Mulsbrom*, and *Gentian*, mingled together. For the Cough and short breath, they give them twigs of Vines, or Juniper mingled with Salt; and some use Betony.

There is a certain tierb called *Aplenom* or *Citterach*, which consumeth the milks of Oxen, found by this occasion: in *Cree* there is a River called *Proterus*, running betwixt the two Cities *Ammon* and *Gentina*, on both sides thereof there were herds of Cattel, but those which fed neer to *Gentina* had no Spleen, and the other which feed neer to *Ammon* were full of Spleen: when the Physicians endeavoured to find out the true cause hereof, they found an herb growing on the coast of *Gentina*, which diminished their Spleen, and for that cause called it *Aplenom*. But now to come to the diseases of their breast and stomach, and first of all to begin with the Cough, which if it be new, may be cured by a pinte of Barley meal with a raw Egge, and half a pinte of sod wine: and if the Cough be old, take two pounds of beaten Hyfop sod in three pints of water, beaten Lentils, or the roots of Onions washed and baked with Wheat meal given fasting, do drive away the oldest Cough. For shortness of breath, their Neat-herds hang about their neck Deaths-herb and Harts-wort: but if their Livers or Lungs be corrupted, (which appeareth by a long Cough and leaness) take the root of *Hæcil*, and put it through the Oxes ear; then like or equal quantity of the juice of Onions, and oil mingled, and put into a pinte of Wine, let it be given to the beast many daies together. If the Ox be troubled with crudity, or a raw evil stomach, you shall know by these signes; he will often belch, his belly will rumble, he will forbear his meat, hanging down his eyes,

G

and

Cuscuta huius  
aut etiam alium  
aut scilicet  
inducti.



and neither chew the cud or lick himself with his tongue: for remedy whereof, take two quarts of warm water, thirty stalkes of *Bol-worts*, see the them together till they be soft, and then give them to the beatt with Vinegar.

But if the crudity caufe his belly to fland out and fwell, then pull his tail downward with all the force that you can, and binde thereunto Mother-wort, mingled with falt, or elfe give them a Glyfter, or anoint a Womans hand with oil, and let her draw out the dung from the fundament, and afterward cut a vein in his tail with a fharp knife. When they be diftempered with choler, burn their legs to the hoofs with a hot Iron, and afterward let them reft upon clean and foft ftraw: when their guts or intrails are pained, they are cured with the fteight of a Duck or a Drake.

Drake. But when the small guts are infected, take fifteen *Cypres Apples*, and so many *Gauls*, mingle and beat them with their weight of old *Cheefe* in four pintes of the *Harpetl wine* you can get, and so divide it into four parts, giving to the beast every day one quantity. The excrements of the belly do deprive the body of all strength and power to labour; wherefore when they are troubled with it, they must rell, and drink nothing for three daies together, and the first day let them forbeare meat, the second day give them the tops of wilde *Olives*, or in defect thereof *Canes* or *Reeds*; the stalks of *Lentike* and *Myrrill*; and a third day a little water, and unto this some adde dried *Grapes* in six pintes of *Harp wine*, given every day in like quantity. When their hinder parts are lame, though congealed bloud in them, whereof there is no outward appearance, take a bunch of *Nettles* with their roots and put it into their mouths, by rubbing whereof the condensate bloud will remove away.

When Oxen come first of all after Winter to grasse, they fall grasse-sick, and pisse bloud; for which they feede together in water Barly, Bread, and Lard, and so give them all together in a drink to the beault: some praise the kernels of Walnuts put into Eggesells for this cure; and other take the bloody water it self, and blow it into the beasts Nostrils; and herd-men by experience have found that there is no better thing then Herb-Robert, to lay the pissing of bloud; they must also be kept in a stall within doors, and be fed with dry grasse and the best hay. If their horns be anointed with wax, oil, and pitch, they feel no pain in their hoofs, except in calves where any beat treadeth and presseth anothers hoof; in which case take oil and soft wine, and then use them in a hot Barly plaister or poulters layed to the wounded place: but if the plough-share hurt the Oses foot, then lay thereunto Stone-pitch, Grease and Brimstone, having first of all seared the wound with a hot Iron bound about with florn wool.

Now to return to the taming and instruction of Oxen. It is said that *Busrîs* King of *Egypt* was the first that ever tamed or yoked Oxen, having his name given him for that purpose. Oxen are by nature neck, gentle, slow, and not stubborn, because being deprived of his genitals he is more tractable, and for this cause it is requisite that they be always used to hand, and to be familiar with man, that he may take bread at his hand, and be tied up to the rack, for by gentleness they are best tamed, being thereby more willing and frong for labour, then if they were roughly yoked or suffered to run wilde without the society and sight of men. *Varro* saith, that it is best to tame them betwixt five and three year old, for before three it is too soon, because they are too tender; and after five it is too late, by reason they are too unweildy and stubborn.

But if any be taken more wilde and unruly, take this direction for their taming: First, if you have any old tamed Oxen, joyn them together, (a wilde and a tame) and if you please, you may make a yoke to hold the necks of three Oxen; so that if the beast would rage and be disobedient, then will the old one both by example and strength draw him on, keeping him from starting aside, and falling down. They must all be accustomed to draw an empty Cart, Wain, or sled through some Town or Village, where there is some concourse of people, or a plow in fallowed ground or sand, so as the beast may not be discouraged by the weight and strength of the busines; their keeper must often with his own hand give them meat into their mouth, and stroke their Noses, that so they may be acquainted with the smell of a man; and likewise put his hands to their sides, and stroke them under their belly, whereby the beast may feel no displeasure by being touched. In some Countries, they wash them all over with wine for two or three daies together, and afterward in a horn give them wine to drink, which doth wonderfully tame them, although they have never been so wild.

Other put their necks in engines, and tame them by flubdrinking their meat. Other affirm, that if a wilde Ox be tyed with a halter made of wool, he will presently wax tame: but to this I leave every man to his particular inclination for this busines; only let them change their Oxens sides, and let them sometime on the right side, and sometime on the left side, and beware that he avoid the Oxes heel, for if once he get the habite of kicking, he will very hardly be retrained from it again. He hath a good memory, and will not forget the man that pricked him, whereas he will not stir at another, being like a man in fetters, who dissembleth vengeance until he be released, and then payeth the person that hath grieved him. Wherefore it is not good to use a young Ox to a good; but rather to awaken his dulness with a whip.

These beasts do understand their own names, and distinguish betwixt the voice of their keepers and strangers. They are also kind to remember and understand numbers, for the King of Persia had certain Oxen, which every day drew water to *Susis* to water his Gardens, their number was an hundred Vessels, which through custom they grew to observe, and therefore not one of them

would halt or loiter in that business, till the whole was accomplished : but after the number fulfilled, there was no good, whip, or other means, could once make them stir, to fetch another draught or burthen. They are said to love their fellows with whom they draw in yolk molt tenderly, whom they seek out with mourning if he be wanting. It is likewise observed in the licking of themselves against the hair, (but as *Cicero* faith) if he bend to the right side and lick that, it presageth a storm; but if he bend to the left side, he foretelleth a calmy fair day : In like manner, when he lougheth and smelleth to the earth, or when he feedeth fuller than ordinary, it betokeneth change of weather: but in the *Autumn*, if Sheep or Oxen dig the earth with their feet, or lie down head to head, it is held for an assured token of a tempest.

They feed by companies and flocks, and their nature is to follow any one which strayeth away: for if the Near-herd be not prent to refrain them, they will all follow to their own danger. Being angry and provoked they will fight with strangers very irefully, with unappeafable contention: for it was seen in *Rbatia*, betwixt *Curia* and *Volcuria*, that when the herds of two Villages met in a certain plain together, they fought so long, that of threescore, four and twenty were slain, and all of them wounded, eight excepted, which the inhabitants took for an ill preface or mischief of some ensuing calamity, and therefore they would not suffer their bodies to be covered with earth: to avoid this contention, skilful Near-herds give their Cattel some strong herbs, as garlicke and fuch like, that the favour may avert that strife. They which come about Oxen, Bulls, and Bugils, must not wear any red garments, because their nature riseth and is provoked to rage, if they see such a colour.

There is great enmity between Oxen and Wolves, for the Wolf (being a flesh-eating creature) lyeth in wait to destroy them; and it is said, that there is so great a natural fear in them, that if a Wolves tail be hanged in the rack or manger where an Ox feedeth, he will abstain from eating. This beast is but simple, though his aspect seem to be very grave; and thereof came the proverb of the Oxen to the yolk, which was called *Ceroma*; wherewithal Wranglers and Prize-players were anointed, but when a foolish and heavy man was anointed they said ironically *Bras ad ceroma*.

Again the folly of this beast appeareth by another Greek proverb, which faith, that *An Ox raiseth dust which blinds his own eye*; to signifie, that foolish and indiscreet men stir up the occasion of their own harmes. The manifold *Epithets* given this beast in *Greek* and *Latin* by sundry authors, do demonstratively shew the manifold conditions of this beast; as that it is called a *Plover*, *Wilde*, an *earth-tiller*, *brazen-footed*, by reason of his hard hoofs, *Cerebrus*, more brain then wit; *horned*, *stubborn*, *horn-sucking*, *hard*, *rough*, *untamed*, *devourer of graffe*, *yoke-bearing*, *fearful*, *overtamed*, *drudges*, *wry-faced*, *slow*, and ill favoured, with many other such notes of their nature, ordination, and condition.

There remain yet of this discourse of Oxen, two other necessary *Treatises*; the one natural, and the other moral. That which is natural, contains the several uses of their particular parts, and first for their flesh, which is held singular for nourishment, for which cause, after their labour which bringeth leanells, they use to put them by for ligation, or (as it is said) in *English* for feeding, which in all countries hath a several manner or custom. *Sotol* affirmeth, that if you give your Cattel when they come fresh from their pasture, Cabbage leaves beaten small with some sharp Vinegar poured among them, and afterward chaffe winowed in a sieve, and mingled with Bran for five daies together, it will much fatten and encrease their flesh, and the sixth day ground Barly, encreasing the quantity by little and little for fix daies together.

Now the best time to feed them in the Winter is about the Cock crowing, and afterward in the morning twilight, and loon after that let them drink : in the Summer let them have their first meat in the morning, and their second service at noon, and then drink after that second meat or eating, and their third meat before evening again, and so let them drink the second time ; It is also to be observed, that their water in Winter time be warmed, and in the Summer time cold. And while they feed, you must often wash the roof and sides of her mouth, for therein will grow certain Wormes which will annoy the beast, and hinder his eating, and after the washing, rub his tongue well with salt : If therefore they be carefully regarded they will grow very fat, especially if they be not over aged, or very young at the time of their feeding ; for by reason of age their teeth grow loose and fall out, and in youth they cannot exceed in fatness, because of their growth : above all Heifers and barren Kie will exceed in fatness, for *Varro* affirmeth, that he saw a field Mouse bring forth young ones in the fat of a Cow having eaten into her body she being alive : the self same thing is reported of a Sow in *Aradia* : Kie will also grow fat when they are with Calf, especially in the middle of that time. The *Turky* live in their greatest feasts and Marriages, to roast or feede an Ox whole, putting in the Oxes belly a whole Sow, and in the Sows belly a Goose, and in the Gooses belly an Egge, to note forth their plenty in great and small things : but the best flesh is of a young Ox, and the worst of an old one, for it begetteth an ill juice or concoction, especially if they which eat be troubled with a Cough or rheumy Ileam, or if the party be in a Consumption, or for a woman that hath ulcers in her belly, the tongue of an Ox or Cow salted and slic aunder, is accounted a very delicate dish, which the Priests of *Mercury* laid did belong to them, because they were the servants of Ipeach, and howsoever in all sacrifices the beasts tongue was refused as a profane meane, yet these Priests made choice thereof, under colour of sacrifice to feed their dainty stomachs.

- *Guidus.*  
[ *Ælianus*

The love of  
Oxen to their  
yolk-fellow.  
Of the lying  
of Oxen, na-  
tural observa-  
tions.

The anger of  
Oxen & Kie,

*Girring.*  
Oxen provoked  
by colour.

Resist.

The natural  
uses of the se-  
veral parts of  
Oxen.

### How to fatten Cattel.

A strange report of a fat Cow, if true.

How to tame  
a yak wide  
Open.

Refis.

### The understanding of Oxen.

**G 2**

The

The horns of Oxen by art of man are made very flexible and straight, whereof are made Combes, hafts for knives, and the ancients have used them for cups to drink in, and for this cause was *Bacchus* painted with horns, and *Crater* was taken for a cup, which is derived of *Kera* a horn. In like manner the first Trumpets were made of horns, as *Virgil* alludeth unto this sentence, *Rauco strepunt corna canit*, and now adays it is become familiar for the carriage of Gunpowder in war. It is reported by some husbandmen, that if feed be cast into the earth out of an Oxes horn (called in old time *Cerasbola*) by reason of a certain coldness, it will never spring up well out of the earth, at the least not so well as when it is sowed with the hand of man. Their skin is used for shoes, Garments, and Gum, because of a spongy matter therein contained, also to make Gunpowder, and it is used in navigation when a shot hath pierced the sides of the ship, presently they clapa raw Ox hide to the mouth of the breach, which instantly keepeth the Water from entering in: likewise they were wont to make bucklers or shields of Oxen and Bugles, and the seven-folded or doubled shield of *Alex*, was nothing else but a shield made of an Ox hide, so many times layed one piece upon another, which caused *Homer* to call it *Sacra brptation*.

Of the teeth of Oxen I know no other use but scraping and making paper smooth with them; their gall being sprinkled among feed which is to be fowen maketh it come up quickly, and killeth field-mice that tast of it, and it is the bane or poison of those creatures, so that they will not come near to it, no not in bread if they discern it; and birds if they eat corn touched with an Oxes gall put into hot water first of all, and the lees of wine, they wax thereby stonified: likewise Emmets will not come upon those places where there remaineth any favour of this gall; and for this cause they anoint herewith the roots of trees. The dung of Oxen is beneficial to Bees if the hive be anointed therewith, for it killeth Spiders, Gnats, and drone-bees; and if good heed be not taken, it will work the like effect upon the Bees themselves: for this cause they use to smother or burn this kind of dung under the mouthes of the Hives in the spring time, which so displaceth and disperfeth all the little enemy-bees in Bee-hives that they never breed again. There is a proverb of the stable of *Angus*, which *Angus* was so rich in Cattel, that he defiled the Countrey with their dung, whereupon that proverb grew: when *Hercules* came unto him he promised him a part of his Countrey to purge that stable, which was not cleaned by the yearly labour of 3000 Oxen, but *Hercules* undertaking the labour turned a River upon it, and so cleaned all. When *Angus* saw that his stable was purged by art, and not by labour, he denied the reward; and because *Phyleus* his eldest Son reproved him for not regarding a man so well deserving, he cast him out of his family for ever.

The manifold use of the members of Oxen and Kie in medicine, now remaineth to be briefly touched. The horn beaten into powder, cureth the Cough, especially the tips or point of the horn, which is also received against the Pustick, or short breath made into pills with Honey. The powder of a Cowes horn mixed with Vinegar, helpeth the morpheus, being washed or anointed therewith. The same infused into the Nostrils, stayeth the bleeding: likewise mingled with warm water and Vinegar, given to a *Splenetic* man for three daies together, it wonderfully worketh upon that passion: powder of the hoof of an Ox with water put upon the Kings evil helpeth it, and with Water and Honey it helpeth the apoplexies and swelling of the body: and the same burned and put into drink, and given to a Woman that lacketh Milk, it encreaseeth milk and strengtheneth her very much. Other take the tongue of a Cow, which they dry so long till it may be beaten into powder, and so give it to a woman in white wine or broth. The dust of the heel of an Ox or ancle bone, taken in wine and put to the gums or teeth do fasten them, and remove the achaway: The ribs of Oxen beaten to powder do stay the flux of blood, and restrain the abundance of monthly courses in women. The ancle of a white Cow laid forty daies and nights into wine, and rubbed on the face with white Liner, taketh spots and maketh the skin look very clear.

Where a man biteth any other living creature, see the flesh of an Ox or a Calf, and after five daies lay it to the fore, and it shall work the ease thereof. The flesh being warm layed to the swellings of the body, ease them: so also do the warm blood and gall of the same beast.

The broath of beef healeth the looseness of the belly, coming by reason of choler; and the broath of Cowes flesh, or the marrow of a Cow, healeth the ulcers and chinks of the mouth. The skin of a Ox (especially the leather thereof) warm in a shoe, burned and applied to pimples in the body or face, cureth them. The skin of the feet and nose of an Ox or Sheep, sod over a soft and gentle fire, untill there arise a certain scum like to giew from it, and afterward dried in the cold, windie air, and drunk helpeth (or at least) ease the burfiness very much.

The marrow of an Ox, or the fewer, helpeth the strains of sinews if they be anointed therewith. If one make a small candle of Paper and Cowes marrow, setting the same on fire, under his browes or eye-lids which are bald without hair, and often anointing the place, he shall have very decent and comely hair grow thereupon. Likewise the fewer of Oxen helpeth against all outward poison: so in all Leprosies, Botches, and Scurviness of the skin, the same mingled with Goose grease, and poured into the eares, helpeth the deafness of them. It is also good against the inflammation of the eares, the stupidity and dulness of the teeth, the running of the eyes, the ulcers and rimes of the mouth, and stiffness of the neck. If ones blood be liquid and apt to run forth of the body,

The medicines  
of the several  
parts of Oxen  
and Kie,

Refis.

Furnerine.

body, it may be well thickned and retained, by drinkin g Ox blood mingled with Vinegar: and the blood of a Cow poured into a wound that bleedeth, stayeth the blood. Likewise the blood of Oxen cureth the ribs in Dogs.

Concerning their Milk, volumes may be written of the several and manifold virtues thereof, for the *Atadians* refused all medicine, only in the Spring time when their beasts did eat grass, they *Pliny* drank Cowes milk, being persuaded, that the virtue and vigour of all good herbs and fruits were A History, received and digested into that liquor; for they gave it medicinally to them which were sick of the Pustick, or Consumption, of an old Cough, of the Consumption of the reins, of the hardness of the belly, and of all manner of poisons which burn inwardly, which is also the opinion of all the *Greek* Physicians: and the shell of a Walnut sod in Cow-milk and laid to the place where a Serpent hath bitten, it cureth it, and stayeth the poison.

The same being new and warm Gargarized into the throat, helpeth the forecels of the kernels, and all pain in the Arteries and swelling in the throat and stomach: and if any man be in danger of a short breath, let him take dayly soft pitch with the hearb *Mithridate*, and Harts suet clarified in a Cup of new Milk, and it hath been proved very profitable.

Where the pains of the stomach come by sadness, Melancholy, or desperation, drink Cow-milk, Womans milk, or Asses milk, wherein a flint stone hath been sodden. When one is troubled with a desire of going often to the stool, and can egest nothing, let him drink Cow-milk and Asses-milk sod together, the same also heated with galls of Iron or Reel, and mingled with one fourth part of water, helpeth the Bloody flux; mingled with a little Hony and a Bils gall, with Cummin and goulds layed to the Navel: and some affirm that Cow-milk doth help conception if a woman be troubled with the whiteflux, so that her womb be endangered, let her drink a purgation for her upper parts, and afterward Asses milk, last of all let her drink Cow-milk and new wine, (for forty daies together if need be) so mingled that the wine appear not in the milk, and it shall stay the flux. But in the use of milk, the rule of *Hippocrates* must be continually observed, that it be not used with any sharp or tart liquor for then it curdleth in the stomach, and turneth into corruption. The whey of Cow-milk mingled with Hony and Salt, as much as the salt will permit and drunk, looseth the hardness of the belly.

The marrow of a Cow mingled with a little meal, and with new cheefe, wonderfully stayeth the Bloodyflux. It is affirmed, that there is in the head of an Ox, a certain little stone, which only in the fear of death he callest out at his mouth, if this stone be taken from them suddenly by cutting the head, it doth make children to breed teeth easily, being soon tyed about them. If a man or woman, drink of the same water, whereof an Ox drunk a little before, it will ease the headach: and in the second venter of a Cow there is a round black *Tophus* found, being of no weight, which is accounted very profitable to Women in hard travails of child-birth. The Liver of an Ox or Cow dried, and drunk in powder cureth the flux of blood. The gall of a Cow is more forcible in operation then all other beasts galls whatsoever. The gall of an Ox mixed with Hony, draweth out any thorn or point of a needle or other Iron thing out of the flesh where it thicketh. Likewise it being mingled with Alome and Myrrine as thick as hony, it cureth those evils which creep and annoy the privie parts; laying upon it afterward Beets sod in wine.

It will not suffer the Kings evil to grow or spread if it be laid upon it at the beginning. The hands washed in an Oxes gall and water, are made white how black soever they were before time; and if purblind eyes be anointed with the gall of a black Cow, one may read any writing the more plainly: there is in the gall of an Ox a certain little stone, like a ring, which the Philosophers call *Alabern* (and some *Quera* and *Nissam*) which being beaten and held to ones Nose, it cleareth the eyes, and maketh that no humour do distill to annoy them; and if one take thereof the quantity of a Lintel seed, with the juice of Beets, it is profitable against the falling evil. If one be deaf or thick of hearing, take the gall of an Ox and the urine of a Goat; or the gall of Goose: likewise, it ease the headach in an Ague, and applied to the temples provoketh sleep, and if the breasts of a woman be anointed therewith it keeps her milk from curdling.

The milt of an Ox is eaten in hony for easing the pains of the milt in a man, and with the skin that a Calf cast out of his dams belly, the ulcers in the face are taken away: and if twenty heads of Garlic be beaten in a Oxes bladder, with a pinte of Vinegar, and laid to the back, it will cure the milt. It is likewise given against the Spleen, and the Colick made like a plaister, and layed to the Navel till one sweat.

The urine of an Ox causeth a cold stomach to recover, and I have seen that the urine of a Cow taken in Gargarizing, did cure intolerable plicers in the mouth. When the Bee hath tasted of the flower of the Corn-tree, the presently dyeth by looseness of the belly, except the salt urine of a Man or an Ox.

There are likewise many uses of the dung of Oxen made in, Physick, whereof Authors are full, but especially against the Gowt, plaistering the sick member therewith hot and newly made: and against the Dropfie, making a plaister thereof with Barley meal and a little Brimstone asperfed, to cover the belly of a man. And thus much for the natural properties of this kind, now we will briefly proceed to the moral.

The moral uses of this beast, both in labour and other things, do declare the dignity and high account our forefathers made hereof, both in Vintage, Harvelt, Plowing, Carriage, Drawing, Sacrificing, and other industry.

The moral  
and external  
use of Oxen  
both for labour  
and other in-  
dustry.

Sacrificing, and making Leagues of truce and peace; in so much as that if this failed, all tillage and vintage must in many places of the world be utterly put down; and in truth, neither the fowls of the air, nor the Horses for the battle, nor the Swine and Dogs could have no sustenance but by the labor of Oxen: for although in some places they have Mules, or Camels, or Elephants, which help them in this labor, yet can there not be in any Nation a neglect of Oxen; and their reverence was so great, that in ancient time when an offender was to be fined in his Cattel (as all americiaments were in those daies) the Judge might not name an Ox, until he had first named a Sheep; and they fined a small offence at two Sheep and not under, and the greatest offence criminal, at thirty Oxen and not above, which were redeemed, by giving for every Oxan hundred Asles, and ten for every Sheep.

Vario.

Heraclides.

It is some question among the ancients, who did first joyn Oxen together for plowing; some affirming that *Aristeus* first learned it of the *Nymphs*, in the Island *Go*; and *Diodorus* affirmeth, that *Dionysius* Son of *Jupiter* and *Ceres* or *Proserpina*, did first of all invent the plow. Some attribute it to *Briges* the *Athenian*; other to *Tripolemus*, *Osiris*, *Habides* a King of *Spain*; and *Virgil* affirmeth most constantly, that it was *Ceres*, as appeareth by this verse;

*Prima Ceres ferro mortales vertere terram  
Instituit, &c.*

Whereunto agreeth *Servius*: but I rather incline to *Josephus*, *Lactantius* and *Eusebius*, who affirm, that long before *Ceres* was born, or *Osiris*, or *Hercules*, or any of the residue, their was a practise of plowing, both among the *Hebrews* and *Egyptians*; and therefore as the God of plowing called by the *Romans* *Jugatinus* (because of yoking Oxen) was a fond aberration from the truth, so are the residue of their inventions about the first man that tilled with Oxen: seeing it is said of *Cain* and *Noah*, that they were husbandmen and tilled the earth. The *Athenians* had three several plow-festivals which they observed yearly, one in *Sciron*, the other in *Rharis*, and the third under *Felimus*: and they call their marriage-festivals, plow-festivals, because then they endeavored by the feed of man to multiply the world, in procreation of children, as they did by the plow to encrease food in the earth.

Augustinus.

The *Grecians* had a kind of writing called *Bowstraphedon*, which began, turned, and ended as the Oxen do in plowing a furrow, continuing from the left hand to the right, and from the right hand to the left again, which no man could read, but he that turned the Paper or Table at every lines end. It is also certain, that in ancient time, the leagues of truce and peace were written in an Oxes hide, as appeareth by that peace which was made by *Tarquinius*, betwixt the *Romans* and the *Cabils*, the which was hanged up in the Temple of *Jupiter*, as *Dionysius* and *Pompeius Sextus* affirm (in the likeness of a buckler or shield): and the chief heads of that peace remained legible in that hide, unto their time, and therefore the ancients called the Oxes hide a shield, in regard that by that conclusion of peace, they were defended from the wars of the *Cabils*.

And there were certain people called *Homolotti* by *Herodotus*, who were wont to strike up their leagues of peace after war and contention, by cutting an Ox into small pieces, which were divided among the people that were to be united, in token of an inseparable union. There be that affirm, that a Team or yoke of Oxen, taking six or eight to the Team, will plow every year, or rather every season a hyde of ground; that is, as some account 20 *Mans*, or in *English* and *Germane* account 30 Acres; which hath gotten the name *Jugera* from this occasion, as *Eusebius* and *Varinus* report. When *Sycheus* the husband of *Dido*, who was daughter of *Agenor* & sister to *Pygmalion*, wandered to and fro in the world with great store of treasure, he was slain by *Pygmalion* secretly, in hope to get his wealth: After which time, it is said, that he appeared to his wife *Dido*, bidding her to save her life from her cruell brother; who more esteemed money then nature, she fled into *Lybia*, taking with her some *Tyrians* among whom she had dwelled, and a competent sum of money; who being come thither, craved of *Intus* King of *Nomades*, to give her but so much land as she could compass in with an Oxes hide, which with much ado she obtained, and then did cut an Oxes skin into small and narrow thongs or lists, wherewith she compassed in so much as builded the large City of *Carthage*, and first of all was called the New City, and the Castle thereof *Byssa*, which signifieth a Hide.

*Eusebius* also reporteth another story to the building of this City, namely that it was called *Carthage* of one of the daughters of *Hercules*, and that when *Elisa* and the other companions of *Dido* came thither for the foundation of the City, they found an Oxes head, whereupon they were discouraged to build there any more, supposing that *Omen* betokened evil unto them, and a perpetual slavery in labour and misery, such as Oxen live in, but afterward they tried in another corner of that ground, wherein they found a Horses head, which they accepted as a good signification of riches, honour, magnanimity, and pleasure, because Horses have all food and maintenance provided for them. Among the *Egyptians* they paint a Lion for strength, an Ox for labor, and a Horse for magnanimity and courage, and the Image of *Mithra* which among the *Persians* signifieth the Sun, is pictured in the face of a Lyon holding the horns of a thriving Ox in both hands, whereby they signify that the Moon doth receive light from the Sun, when she beginneth to be separated from her beams.

There is in the Coats of *Babylon* a Gem or precious stone like the heart of an Ox, and there is another called *Sarciter*, which representeth the flesh of an Ox. The ancients had like-

wise

wife so great regard of this beast, that they would neither sacrifice nor eat of a labouring Ox, wherefore *Hercules* was condemned when he had desired meat of *Trochamus* in *Dyrpia*, for his hungry companion the Son of *Hyle*, because by violence he took from him one of his Oxen and slew him. A crowned Ox was also among the *Romans* a sign of peace; for the Souldiers which kept the Cattle of *Antioch* near the river *Euphrates* against *Julianus* and his Army, when they yielded themselves to mercy, they descended from the Cattle, driving before them a crowned Ox: from this manifold necessity and dignity of this beast came the Idolatrous custom of the Heathens, and especially the *Egyptians*, for they worshipped him instead of God calling him *Apu* and *Epaphus*: whose choyce was on this sort. He had on his right side an exceeding splendid white spot, and his horns crooking together like the new Moon, having a great bunch on his tongue, which they call *Cantarus*: neither do they suffer him to exceed a certain number of years, or grow very big, for these causes they give him not of the water of *Nilus* to drink, but of another consecrated well, which hindereth his growth: and also when he is come to his full age, they kill him, by drowning him in another consecrated well of the Priests: which being done, they seek with mourning another (having shaved their heads) to substitute in his place, wherein they are never very long but they finde one, and then in a holy Ship, sacred for that purpose, they transport and convey him to *Memphis*. And the *Egyptians* did account him a blessed and happy man, out of whose fold the Priest had taken that Ox-God. He hath two Temples erected for him, which they call his Chambers, where he giveth forth his Augurisms, answering none but children and youths playing before his Temples: and refusing aged persons, especially women; and if any not sacred, happen to enter into one of his Temples, he dyeth for it, and if into the other, it fore-sheweth some monstrous cursed event, as they fondly imagine.

The manner of his answers is privately to them that give him meat, taking it at their hands; and they observe with great religion, that when *Germanicus* the Emperour came to ask counsel of him, he turned from him and would not take meat at his hand; for presently after he was slain. In a year they slew him a Cow, with such marks as he hath, and away they put him to death upon the same day of the week that he was found; and in *Nile* near *Memphis*, there was a place called *Phiale*, where were preserved a Golden and a Silver-dish, which upon the birth or Calving days of *Apis*, they threw down into the river, and those days were feaven; wherein they affirm that never man was hurt by Crocodiles. The *Egyptians* do also consecrate an Ox to the Moon, and a Cow to *Urania*. It is reported that *Mycerinus* King of *Egypt*, fell in love with his own Daughter: and by violence did ravish her; she not able to endure the conscience of such a fact, hanged herself: whereupon the King her impure father, did bury her in a wooden Ox, and so placed her in a secret place or chamber, to whom daily they offer many odours; but the mother of the maiden did cut off the hands of those Virgins or Women that attended on her Daughter, and would not rescue her from so vile a contempt. There were also many other pictures of Oxen, as in *Corymba* and *Eretria*; and most famous was that of *Perillus*, which he made and presented to *Phalaris* the Tyrant of *Agrirent*, shewing him; that if he would torment a man, he should put him into that Ox set over a fire, and his voyce of crying should be like the laughing of a Heifer; which thing being heard of, the Tyrant to shew his detestation of more strange invented torments then he had formerly used, he caused *Perillus*, that presented it unto him, to be put into it alive, and so setting it over a fire, made experiment of the work upon the workman, who bellowed like a Cow, and was so tormented to death for that damnable and dangerous invention; which caused *Ovid* to write thus:

*Et Phalaris tauro violentus membra Perilli  
Torruit: infelix imbutus auctor opus.*

When an Ox or Cow in ancient time did dye of themselves, (*Viz.*) if it were an Ox, they buried him under the walls of some City, leaving his horn sticking visibly out of the earth, to signify the place of his burial, for when his flesh was consumed, they took it up again, and buried the bones in the Temples of *Venus* in other places: but the body of a dead Cow they cast into some great River near adjoining. The Poets have fained a certain Monster called *Minotaurus*, having in part the form of a man, and in part the form of a Bull; and they say, that *Psiphia* the Daughter of the Sun and wife of *Minos*, King of *Crete*, fell in love with a Bull, and by the help of *Daedalus*, she was included in a wooden Heifer, covered with a Cows hide, and so had copulation with the Bull, and so came that monster *Minos* included in a labyrinth; and constrained the *Athenians*, who had slain his son *Androgeus*, to send every year seven young men, and seven maids to be given to that Monster to feed upon, for he would eat mans flesh. At last *Theseus* son of *Aegon* King of *Athens*, came into that labyrinth, and slew that *Minotaurus*, and by the help of *Ariadne* escaped out of the labyrinth. Other relate the story in this manner; that when the *Cretians* would have expelled *Minos* from his Kingdom; he vowed that whatsoever likeness first appeared out of the Sea for sign of victory unto him, he would sacrifice it to the Gods, if he did enjoy his Regiment: and thereupon a goodly Bull came unto him out of the Sea, wherewithall he was delighted: But after he had recovered his Kingdom in quiet, he kept that Bull in his own hands, and sacrificed another; and that by this Bull was the *Minotaurus* begotten on his wife *Psiphia*. But the truth is; that when *Minos* was in danger to lose his Kingdom; one *Taurus*, a valiant Prince and Captain, came with a Navy,

Idolatory com-  
mitted by an  
Ox in the  
hive of the  
choise of *Apu*.

A History.

Herodotus.

A History.

Of the picture of  
Oxen.

Of the monster  
Minotaurus.

A History.

Clement.

Giraldus.

Pliny.

of good souldiers, and established him in quiet. Afterward falling in love with *Phaëbe* King *Minos* wife, he lay with her in the house of *Dadalus*: which *Dadalus* wrought with the Queen to give him his pleasure, and that the *Minotaur* was a Monster in *Cree*, that had the face of an Oxe, and the other members like a man, such an one was seen in *Aristoteles* time. Although other take it for a fiction; because the *Romans* had it pictured in their Ensigns of war, untill *Caius Marius* altered it to an Eagle, which remaineth to this day. *Alvian* yieldeth this reason, why the *Romans* gave such an Arms, to signify that secrecy becometh a Captain, and that proud and crafty counsels do hurt the authors of them.

*Limine quod caeco obscura & caliginis monstrum  
Gnostiaci claustrum Dadalus in laetitia:  
Depictum Komana phalanx in praëlia gestat,  
Semiviroque nitent signa superba dore;  
Nisque morient debere ducum secreta latere  
Confilia, auloribi cognita techna uices.*

It is reported also, that when *Cadmus* went from *Delphos* to *Phocia*, an Oxe did direct him in the way, and was his guide; which Oxe was brought out of the herds of *Pelagou*, having in both his sides a white spot: it must needs be understood of the Moon, for *Cadmus* flying by night, having the Moon to shine upon him (which is Hieroglyphically deciphered by the Oxe,) gave him light and direction to another City. It were endless to prosecute the several speeches, proverbs, allusions, emblems, plays, prizes, and hieroglyphicks made upon Oxen; whereby, men and women, Cities, Regions, and People have taken denomination from Oxen; but also some of the stars in the firmament: therefore I will not proceed to those devices, but only touch the sacrifices made with Oxen, and so conclude this story.

It cannot be denied, that the prime institution of sacrifices, was from, by, and for the Ordinance of God, to teach the world to worship him in blood for sin: which could not be expiated but by the blood of the only immaculate Son and Lamb of God; and therefore I will but remember how corruption polluted that Ordinance, which was purely without idle Ceremonies instituted by the overruling God; and yet was by mans invention made wretched, horrible, and damnable, through abuse of the fact, that otherwise by divine constitution (as appears in holy Scripture) was heavenly, honourable and blessed.

To begin therefore with the original of that Heathenish and Paganish sacrifice, in stead of God the only true and divine Essence, to whom all sacrifice and divine worship was due, and whose creatures, both Men, Oxen, and all other living and visible things are; they offered unto all the hoasts of Heaven, the Sun, and Stars, the Heathen gods, *Jupiter, Mars, Minerva, Pandisus*, and others: and if the Sacrifice were costly and sumptuous, it was called *Hecombe*. Now before their Sacrifice they made Prayers, burned Incense for odours, presented *Prothymis* (as they were termed) certain preparations and cakes made of Barley and Salt, (called *Vlochyte*.) After which, the Priest turned him sometimes to the right hand, and sometimes to the left, and then began to take the grille hairs growing on the Oxes fore-head betwixt his horns, making a taste of them, and casting them in the fire to begin the Sacrifice. Then did he give into the hands of the people standing by, little pots of Wine likewise, to taste for Sacrifice, and then he which killed the beast drew his knife, or axe, or cleaver, from the head to the taylor of the beast. Now in every Sacrifice they had burning torches, which were lawful for none to carry but for men, and not women; then the Priest commanded to kill the Sacrifice, which sometime they did by knocking him on the head, if the beast were to be sacrificed to *Hell*, and those that were therein; for they sacrificed a barren Cow, or a black Sheep to those phoils. But if the Sacrifice were for Heaven, and to the powers thereof, they lifted up his head and cut his throat: then put they under him their *Sphagian* vessels to receive his blood, and when the beast was slain down, they stayed off his skin.

Then did the Priest or *Flamen* divide the entrails, that so he might make his augurism (the bowels being proved at the Altar.) Having looked into the bowels, they took out of every gut, member and part, a firil fruits, moulded them together in the meal of green wheat-corn, then was it given to the Priest, who put thereunto frankincense, herbmary, and fire and so burned them all together, which was called a perfect Hoast. But if they sacrificed to the gods of the Sea, then did they first of all wave the bowels of the beast in the Sea-floods before it was burned. The best Sacrifices were fatted and white Oxen or Kine, such as had never been under yoke; for the beast used to labour was accounted unclean: they never offered in Sacrifice one under thirty days old, nor over five years by the laws of the Priests. When the *Spanians* overcame their enemies by stratagem, they sacrificed to *Mars* an Oxe; but when by open force, they sacrificed a Cock; for they esteemed more of an unbloody than a bloody victory. When a man sacrificed a Cow to *Minerva*, he was bound to Sacrifice a Sheep and an Oxe to *Pandisus*.

When the *Lycerians* in a publick spectacle would make a Sacrifice, they wanted an Oxe; for which cause they gathered together so many sticks of small wood, as made the Image of an Oxe arificially conjoynted together, and so setting it on fire burned it for an offering: whereupon a *Lycerian* Oxe, was an Ironical Proverb, for a Sacrifice of no weight or merit. It is also reported, that an Heifer being brought to the Altar of *Minerva* to be sacrificed, did there Calve; wherefore the

the Priests would not meddle with her, but let her go away free; because *Minerva* was the goddess of procreation; holding it an impiousthing to kill that in Sacrifice which had brought forth a young one at the Altar: to conclude, as *Vergilius* saith, that on a time Justice was so offended with men, because they imbrowed every Altar with the blood of Oxen and Cattel, that therefore she left the Earth, and retired back again to dwell among the Stars: so will we in this discourse cease from any further prosecution of the Moral or Natural description of these Beasts, leaving their lawful use to the necessity of mankind, and their abusive idolatrous sacrifices to him that loveth all his creatures, and will require at mans hand an account of the life and blood of brute beasts.

## Of the CALF.

A Calf, is a young or late enixed Bull or Cow, which is called in *Hebrew*, *Egel*; or *Par*: and some- The definition  
times *Ben-baker*, the son of an Oxe. Yet *Rabbi Solomon*, and *Abraham Ezra*, expound *Egel*, for and name,  
a Calf of one year old. The *Saxons* of that word call a Calf *Hesl*. The *Græcians*, *Mojchos*; where-  
of is derived *Mojcharius*: but at this day they call him *Moukari*, or *Mojchare*. The *Italians*, *Vuello*;  
the *French*, *Veau*; the *Spaniards*, *Ternera* of *Ternizado*, signifying tenderness; and sometimes *Beza-*  
ron and *Vexerro*; the *German*, *Ein Kalb*, the *Flemmings*, *Kalf*; and the *Latines*, *Vitulus*, of the old  
word *Vitulus*, signifying to be wanton, for Calves are exceedingly given to sport and wantonness;  
or as other suppose from the Greek word *Italus*, came *Vitulus*; and therefore the *Latines* do not al-  
ways take *Vitulus* for a young or new foaled beast, but sometime for a Cow, as *Virgil* Elog.

— Ego hanc vitulum (ut forte recuses,  
Biv veni ad multum, hinc alit ubere suum)  
Depone.

And this word (like the Greek, *Mojchos*) signifieth male and female: whereunto by divers Au-  
thors both *Greek* and *Latine*, are added divers Epithites by way of explication, both of the condi-  
tion, inclination, and use of this young beast; calling it wilde, ripe for the temples, unarmed, weak,  
ficklings, tender, wandering, unhorned, and such like. And because the Poets saign that *Io* was turn- The Epithites  
ed into a Cow, and that the violet herb was assigned by *Jupiter* for her meat; they derive *Viola*, a Vi- of a Calf,  
olet, from *Vitula* a Calf, by a kinde of *Græcian* imitation.

It is also certain that the honor of this young beast have given denomination to some men, as *Pom- Varro*.  
*penius Vitulus*, and *Vitulus Niger Turamius*, and *Vitellius* was derived from this item or theam, al- Men named  
though he were an Emperor. The like may be said of *Mojchos* in *Greek*, signifying a Calf; for after Calves,  
there was one *Mojchos* a Sophist that drank nothing but water, and there was another *Mojchos*, a  
Grammarian of *Syracuse*, whom *Athenæus* doth record, was a familiar of *Aristarchus*, and also of another  
a Poet of the *Buclicks*; and this serveth to shew us, that the love our Ancestors bare unto Cat-  
tel, appeared in taking upon them their names, and were not ashamed in those elder times, where-  
in wisdom and invention was most pregnable, to glory in their herds from which they received main-  
tenance. But to the purpose, that which is said of the several parts of an Oxe and a Cow, belongeth  
also to a Calf; for their Anatomy differeth not, because they are conceived and generated by them,  
and in them: and also their birth, and other such things concerning that, must be inquired in the  
discourse of a Cow.

It is reported by an obscure Author, that if the hoof of a Calf be not abolved or finished in the  
Dams belly before the time of Calving, it will dye. And also it must be observed, that the same A secret by  
the hoof,  
diseases which do infect and harm an Oxe do also befall Calves, to their extreme perill: but they are  
to be cured by the same fore-named remedies. And above the residue, these young beasts are  
troubled with worms, which are ingendered by crudity, but their cure is to keep them fasting till  
they have well digested their meat, and then take lupines half-fod, and half raw, beaten together,  
and let the juice thereof be poured down his throat; otherwise take dry figs and fitches beaten to-  
gether with *Santonias*, called Lavender-cotten, and so put it down the calves throat as afore said, or else  
the fat of a Calf and Marcube with the juice of Leeks, will certainly kill these Evils. It is the manner  
to regard what Calves you will keep and what you will make of and kill either for sacrifice, as in an  
ancient time, or private use, and to mark and name those that are to be reserved for breed and labour,  
according to these verses:

*Post partum curant, vitulus traductus omittit,  
Et quos aut pecori malum submittere habendo.  
Continuoque notas & nomina gentis insunt,  
Aut aris servare sacris, aut fœdere terram,  
Et campum borrentem fradibus invertere glebis.*

And all these things are to be performed immediately after their weaning: and then in the next  
place you must regard to geld the males, which is to be performed in *June*, or as *Magus* saith, in *May*,  
or at the farthest let them not be above a year old; for else they will grow very deformed and  
small: but if you lib them after two years old, they will prove stubborn and intractable, The libbing  
wherefore it is better to geld them while they be young ones, which is to be performed not with  
any

Aristotle.  
Sotion.  
Varro.

any knife or iron instrument, because it will draw much blood, and indanger the beast through pain, but rather with a cloven reed or stick, pressing it together by little and little: but if it happen that one of a year or two years old be to be libbed, then you must use a sharp knife, after you have pressed the stones into the cords, and cut them out at one stroke, and for stanching of the blood, let the cord, and the ends of the veins be seared with an hot iron, and so the wound is cured as soon as it is made.

Palladius.  
Sotion.  
Columella.  
Varro.

And now the time for the effecting hereof, is best in the wane of the Moon, either in the Spring or Autumn; but it is good to leave as many of the veins and nerves of the virile member untouched and whole as may be, that so he may not lose any condition of a male, except the power of generation. And if the wound be overmuch given to bleed, lay upon it ashes with the fume of filneration. And if the wound be overmuch given to bleed, lay upon it ashes with the fume of filneration. And if the wound be overmuch given to bleed, lay upon it ashes with the fume of filneration. And if the wound be overmuch given to bleed, lay upon it ashes with the fume of filneration.

Food for  
Calves.

Sacrifices of  
Calves.

Pliny.  
Celsus.  
Josephus.  
A wonder.  
Monsters of  
Calves.

Nic. Villagor.

The Ancients called *Vitioria* by the name of the Goddess *Vitula*, because they sacrificed unto her Calves, which was termed a *Vitulation*: and this was usual for victory and plenty, as is to be seen at large in *Girallus*, *Macrobius*, *Remus*, *Ovid*, and *Virgil*: but the Heathens had this knowledge, that their Gods would not accept at their hands a lame Calf for a Sacrifice, although it were brought to the Altar; and if the tail of the Calf did not touch the joyns of his hinder legs, they did not receive him for Sacrifice. And it is said of *Emilius Paulus*, when he was to go against the *Macedonians*, he sacrificed to the Moon in her declination eleven Calves. It is very strange, that a Calf being ready to be sacrificed at the Temple of *Jerusalem*, brought forth a Lamb, which was one fore-shewing sign of *Jerusalem's* destruction. But *Aristotle* declareth, that in his time, there was a Calf that had the head of a child; and in *Luceria* a Town of *Helvetia*, was there a Calf which in his hinder parts was a Hart.

When *Charles* the fifth, went with his Army into *Africa*, and arrived at *Larghera*, a Noble City of *Sardinia*, there happened an exceeding great wonder; for an Oxe brought forth a Calf with two heads; and the woman that did owe the Oxe, presented the Calf to the Emperor: and since that time I have seen the picture of a more strange beast calved at *Bonna*, in the Bishoprick of *Colem*, which had two heads; one of them in the side not bigger then a Hares head, and two bodies joyned together; whereof the hinder parts were smooth and bald, but the tail black and hairy; it had also seven feet; whereof one had three hoofs: this Monster lived a little while, and was brought forth in *August* the 16. day of *May*, to the wonder and admiration of all them, who either knew the truth, or had seen the picture.

The flesh of  
Calves.

Butchers are wont to buy Calves for to kill, and sell their flesh; for in all creatures, the flesh of the young ones are much better then the elder, because they are moist and soft, and therefore will digest and concoct more easily: and for this cause Kids, Lambs, and Calves, are not out of season any time of the year; and are good from fifteen days to two months old, being ornaments to the Tables of great Noble men; which caused *Fiera* to make this *Distichon*:

*Affidius habebat vitulum tua prandia in usus,  
Cui madida et saporata iuncta tepore caro est.*

And principally the *Germani* use the chawthern, the head, and the feet, for the beginning of their meals; and the other part either roasted, or baked, and sometime sod in broth, and then buttered, spiced and sauced, and eaten with Onions.

Pliny.  
Of the medi-  
cines.

The Medicines arising from this beast, are the same that come from his Sires before spoken of, and especially the flesh of a Calf doth keep the flesh of a new wound, (if it be applied thereunto) from swelling, and being foddren, it is precious against the bitings of a mans teeth: and when a mad Dog hath bitten a man or a beast, they use to pare the wound to the quick; and having foddren Veal mingled with the sewer and heel, they lay some to the wound, and make the patient drink of the broth: and the same broth is sovereign against all the bitings of Serpents. The horns of a Calf sod soft, are good against all intoxicate poyson, and especially Hemlock. The powder of a Calves thigh drunk in Womans Milk, cureth all filthy running Ulcers; and out of the brains of a Calf they make an Ointment, to loosen the hardness of the belly. The marrow softneth all the joyns, driveth away the bunches arising in the body; having an operation to soften, fill, dry and heat. Take Oyl, Wax, Rust, and the marrow of a Calf, against all bunches in the face: and Calves marrow with an equal quantity of Whay, Oyl, Roast-cake and an Egge, do soften the hardness of the

the cheeks and eye-lids, being laid to for a plaister, and the same mixed with Cummin, and infused into the ears, healeth the pains of them: and also caeth the Ulcers in the mouth.

The marrow with the sewer composed together, cureth all Ulcers and corruptions in the Secrets of Men and Women. The Fat pounded with Salt, cureth the Louzy evil, and likewise the ulcerous sores in the head. The same mixed with the fat of a Goose, and the juice of Basil or wilde Cummin, and infused into the ears, helpeth deafness and pains thereof. The fat taken out of the thigh of a Calf, and sod in three portingers of water, and sucked up, is good for them that have the Flux: and the dung of a Calf fried in a pan, laid to the Buttocks and Secrets, doth wonderfully cure the Bloodyflux: also laid to the reins, provoketh Urine; and sod with Rue, cureth all the inflammations in the seat of a man or woman. The Sewer of a Calf with *Nitre*, asswageth the swelling of the coods, being applied to them like a plaister: and the Sewer alone, doth cure the peeling of the Nails. The Liver with Sage-leaves cut together, and pressed to a liquor, being drunk, caeth the pain in the small of the Belly. The gall mingled with powder of a Harts-horn, and the Seed of Marjoram, cureth Leprosities and Scurs; and the gall alone anointed upon the head, driveth away nits. The milk of a Calf is good for the milk of a man, and for Ulcers in the mouth; and glew made of his stones, as thick as Honey, and anointed upon the leprous place, cureth the same, if it be suffered to dry thereupon.

Pliny.

Marcellus.

Leon. Bat.  
Pliny.

With the dung of Calves they perfume the places which are hurt with Scorpions; and the ashes of this dung with Vinegar, stayeth bleeding: *Marcellus* magnifieth it above measure, for the cure of the Gout, to take the fume of a Calf which never eat grafs, mixed with lees of Vinegar; and also for the deafness of the ears, (when there is pain withall) take the Urine of a Bull, Goat, or Calf, and one third part of Vinegar well sod together, with the herb *Fulonia*, then put it into a flagon with a small mouth, and let the neck of the Patient be perfumed therewith.

### Of the supposed Beast CACUS.

There be some of the late Writers, which take the *Cacus* spoken of by *Virgil* in his eight Book of *Aeneid*, to be a wilde beast, which *Virgil* describeth in these words:

*Ille spelunca fuit, vasto submonte recessu:  
Semi-hominis Caci: facies quam ille regabat,  
Solus inaccessam radit, semperque recenti  
Cade reprobis humis, foribusque offusa laperbis  
Ora virum tristis pendebant pallida tabe.  
Hinc monstro Valomus erat pater: illius atrox  
Ore vorans ignes magna se mole ferebat.  
Nequeunt expleri corda tuendo:  
Pectora semiferi atque exstincti functus ignes;*

That is, *Cacus* was half a beast and half a man, who had a cave in the earth against the Sun, his Den replenished with the heads of men, and he himself breathing out fire, so that the earth was warmed with the slaughter of men slain by him, whose slaughter he fastened upon his own doores, being supposed to be the son of *Valcum*. And there be some that affirm this *Cacus*, to have walked and depopulated all *Italy*; and at length when *Hercules* had slain *Geryon*, as he came out of *Spain* through *Italy* with the Oxen which he had taken from *Geryon*, *Cacus* drew divers of them into his cave by their tails: but when *Hercules* missed daily some of Cattel, and knew not which way they strayed, at last he came to the den of *Cacus*: and seeing all the steps stand forward by reason the cattel were drawn in backward, he departed; and going away, he heard the loughing of the Oxen for their fellows, whereby he discovered the fraud of *Cacus*: whereupon he presently ran and took his club, the Monster being within his cave, closed up the mouth thereof with a wonderful great stone, and so hid himself for fear: but *Hercules* went to the top of the Mountain, and there digging down the same, until he opened the cave, then leaped in suddenly and slew the Monster, and recovered his Oxen.

But the truth is, this forged *Cacus* was a wicked servant of *Evander*, which used great robbery in the Mountains, and by reason of his evil life was called *Cacus*; for *Cakes* in Greek signifieth evil. He was said to breath forth fire, because he burned up their corn growing in the fields, and at last was betrayed of his own Sister; for which cause she was desisted, and the Virgins of *Vesta* made Sacrifice to her: and therefore it shall be idle to prosecute this fable any farther (as *Albertus Magnus* doth) it being like the fable of *Alcida*, which the Poets feign was a Bird of the earth, and being invincible burned up all *Phrygia*, and at last was slain by *Minerva*.



## Of the CAMEL.

**A**lthough there be divers sorts of Camels, according to their several Countries; yet is the name not much varied, but taken in the general sense of the denomination of every particular. The Hebrews call it *Gamel*; the Chaldeans, *Gamela*; and the Greeks, *Gamel*; the Arabians, *Gamel*; the Egyptians, *Aligazar*. The Persians, *Sobtor*; the Saracens, *Symel*; the Turks call a company of Camels travel, *Caravana*. The Italians and Spaniards call a Camel, *Camello*; the French, *Chameau*; the English, *Camel*. The Greeks, *Camelos*. The Egyptians, call it *Vuelblud*; and the reason of the name *Camelos*, in Greek, is, because his burden or load is laid upon him kneeling or lying, derived (as it may seem) of *Campsin merous*, the bending of his knees, and slowness of pace; wherefore a man of a slow pace, was among the Egyptians deciphered by a Camel. For that cause, there is Town in Syria called *Gangamela*; that is, the house of a Camel, erected by Darius the Son of Hystaspis, allowing a certain provision of food therein for wearied and tyred Camels. The Epithets given to this beast are not many among Authors, for he is tearmed by them rough, deformed, and thirsting; as *Juvenal*.

*Deformis poterunt immania membra Cameli.*

And *Perfius* in his fifth Satyre saith;

*Tolle recens primus piper à sitiente Camelo.*

**The kinds of Camels.** There are of them divers kinds according to the Countries wherein they breed: as in *India*, in *Arabia*, and in *Bactria*: All those which are in *India*, are said by *Didymus* to be bred in the Mountains of the *Bactrians*, and have two bunches on their back, and one other on their breast, whereupon they lean: they have sometimes a Bore for their Sire, which feedeth with the flock of she-Camels; for as Mules they have sometimes a Bore for their Sire, which feedeth with the flock of she-Camels; and that a Camel is so and Horses will couple together in copulation, so also will Bores and Camels: and that a Camel is so, ingendered sometimes, the roughness of his hair like a Bore or Swine, and the strength of his body, are sufficient evidences; and these are worthily called *Bactrians*, because they were first of all conceived among them, having two bunches on their backs; whereas the *Arabian* hath but one. The colour of this Camel is for the most part brown, or puke; yet there are herds of white ones in *India*.

**The parts and colour of these Camels.** *Violentius Lagi* brought two strange things into *Egypt*, a black Camel; and a man which was the one half white, and the other half black in equal proportion; the which caused the Egyptians to wonder and marvel at the shape and proportion of the Camel, and so laugh at the man: whereupon it grew to a Proverb, a Camel among the Egyptians, for a matter fearful at the first, and ridiculous at the last.

**The several parts of a Camel.** The head and neck of this beast is different in proportion from all others; yet the *Ethiopians* have a beast called *Nabim*, which in his neck resembleth a Horse, and in his head a Camel. They have not teeth on both sides, although they want horns, (I mean both the *Arabian* and *Bactrian* Camel;) whereof *Aristotle* disputeth the reason, in the third Book of the parts of creatures, and fourteenth chapter. Their necks are long and nimble, whereby the whole body is much relieved; and in their neck toward the nether part of the throat, there is a place called *Anbar*, wherein a Camel doth by spear or sword, most easily receive his mortal or deadly wound.

**Silvaticus.** His belly is variable, now great, now small like an Oxes; his gall is not distinguished within him like other beasts, but only carried in great veins and therefore some have thought he had none, and assigned that as a cause of his long life. Betwixt his thighs he hath two udders, which have four speans depending from them like a Cow. His genital part is constricted, and standeth upon a sinew, inasmuch as thereof may a string be made, for the bending of the strongest bow. The tail is like the tail of an Ass, hanging down to their knees, they have knees in every leg, having in their former leg; three bones, and in the hinder four. They have an ancle like an Oxes, and very small but tocks, for the proportion of their great body: their foot is cloven, but so, that in the under part it hath but two fissures or clefts, opening the breadth of a finger, and in the upper part four fissures or clefts, opening a little, and having a little thing growing in them, like as in the foot of a Goose: The foot it self is fleshy like a Bears, and therefore they are shod with leather when they travail, lest the gauling of their feet cause them to tire.

**Averenna** affirmeth, that he had seen Camels with whole feet, like a Horses, but their feet (although fleshy) are so tyed together with little lungs that they never wear; and their manner of going or pace is like a Lyons, so walking as the left foot never out-goeth the right, whereas all other beasts change the setting forward of their feet, and lean upon their left feet while they remove their right; but these alter step after step, so as the left foot behinde, followeth the right before, and the right; but these alter step after step, so as the left foot behinde, followeth the right before, and the right foot followeth the left before. Those Camels which are conceived by Bores are the strongest, and fall not so quickly into the myre as other, although his load be twice so heavy.

**The food of Camels.** Camels love grafs (called *Scabnamiti*) and especially Barley, which they eat up wonderful greedily untill all be in their stomach, and then will they chew thereupon all the night long: so that the greatness of their belly to lodge their meat in before concoction is better then the benefit





Silvaticus.  
Paul Venet.  
Philobrotus.  
Cilius.  
Their drink  
must not be  
clear.

benefit of their upper teeth, because he can ruminate and chew it so often as he pleaseth. There is a certain herb, which hath a feed like a myrtle feed, that is poyson to worms, and this feed is food for Camels; wherewith they grow fat. It is therefore called Camel-thorn, and *Aftergar* in the *Arabian* tongue. In the Province of *Aden*, both Sheep, Oxen, Horses, and Camels, eat a kinde of fish, and then better being dry and stale, then new and fresh, by reason the immoderate heat in that region burneth up all pasture and fruits: neither is there any beast which is so easily fed as a Camel. They will not drink of clear or clean water, but of muddy and stinky, and therefore they stamp in it with their feet. They will endure thirst for three or four days together; but when they come to drink, they suck in above measure, recompensing their former thirst, and providing against that which is to come; and of all kinds the *Bedivians* are least troubled with thirst.

Their procre-  
ation.

They stale from one side to another, otherwise then any other beasts do: this beast is very hot by nature, and therefore wanton and full of sport and wrath; braying most fearfully when they are angered. They engender like Elephants and Tygers; that is, the female lying or sitting on the ground, which the male imbraceth like other males; and continue in copulation a whole day together. When they are to ingender, they go unto the secretest places they can finde; herein excelling in modesty the ancient *Massagets*, who were not ashamed to lie with their wives in the open field, and publick view of one another, where as brute beasts by instinct of nature, make the procreation of their kinde to be a most secret shameful honest action.

Ca'ius.  
Avicenn.

At the time therefore of their lust, they are most unruly and fierce, yielding to none, no not to their own keepers: the best time of their copulation is in *September*, for in *Arabia*, they begin to ingender in the third year of their age, and so within ten or eleven months after she is delivered of young, being never above one at a time, for twins come not in her great belly; so the goeth a year before she conceive again, although her young be separated or weaned, before which time they do not commonly. Unto their former modesty for their copulation, we may adde another divine instinct and most true observation about the same, for the male will never cover his mother, or his sister; wherefore it is sincerely reported, that when a certain Camel-keeper (desirous to try this secret) having the male, son to a female, which he also kept, he so covered the female-mother-Camel in all parts of her body, except her secrets, that nothing could be seen of her, and so brought her lustful son to cover her; which according to his present rage he performed. As soon as he had done it, his master and owner pulled away the mask or disguise from the dam, in the presence of the son; whereby he instantly perceived his keepers fraud, in making him unnaturally to have copulation with his own mother. In revenge whereof he ran upon him, and taking him in his mouth, lift him up into the air, presently letting him fall with noise and cry underneath his murdering and man-quelling feet; where, with unappeasable wrath and blood-desiring livor, he pressed and trod to pieces the incest marriage-cattler, twist him and his dearest mother; and yet not herewith satisfied, like some reasonable creature, deprived of heavenly grace, and carryed with deadly revenge against such uncleanness, being persuaded that the guilt of such an offence could never receive sufficient expiation by the death of the first deviler, except the beguiled party suffered also some smart of penalty; adjudged himself to death, and no longer worthy to live by natures benefit, which had so violated the womb that first conceived him; and therefore running to and fro, as it were to finde out a hang-man for himself, at last found a steepy rock, from whence he leaped down to end his life; and although he could not prevent his offence, yet he thought it best to cleanse away his mothers adultery with the sacrifice of that blood which was first conceived in that wombe, which he had defiled.

The pace and  
agility of Ca-  
mels.  
Herodotus.

These Camels are kept in herds, and are as swift as Horses, according to the measure of their strength, not only because of their nimbleness, but also because their strides and reach doth gather in more ground: for which cause they are used by the *Indians* for race, when they go to fetch the gold which is said to be kept by the *Formice Lyons*, which are not much bigger then Foxes: yet many times do these Lyons overtake the Camels in course, and tear the riders in pieces. They have been also used for battel or war (by the *Arabians* in the *Persian* war;) but their fear is so great of an Horle, that (as *Xenophon* saith in the institution of *Cyrus*) when the Armies came to joyn, neither the Camel would approach to the Horle, or the Horle to the Camel; whereupon it is accounted a base and unprofitable thing for a man to nourish Camels for fight; yet the *Persians* for the fight of *Cyrus* in *Lydia*, ever nourished Camels and Horses together, to take away their fear one from another. Therefore they are used for carriage, which they will perform with great facility, being taught by their keepers to kneel and lye down to take up their burthens, which by reason of their height a man cannot lay on them; always provided, that he will never go beyond his ordinary lodging and bating place, or endure more then his usual burthen; and it hath been seen that one of these *Bedivian* Camels, hath carryed above ten Minars of corn, and above that a bed with five men therein. They will travel in a day above forty ordinary miles; for as *Pliny* saith, that there was from *Thome* to *Gaza*, sixty and two lodging places for Camels, which was in length one thousand five hundred thirty and seven miles.

Of the labour  
and employ-  
ment of Ca-  
mels.

Pliny.

Diogenes.

They are also used for the plow in *Numidia*, and for this cause are yoked sometimes with Horses, but *Heliogabals* like as the *Tartarians*, yoked them together not only for private spectacles and plays; but also for drawing of Waggonns and Chariots. When they desire to have them free and strong for any labour in the field, or war, they use to geld both the male and the female, the manner whereof

whereof is in this sort. The male by taking away his stones, and the female by searing her privy parts within the brim and laps thereof with a hot iron, which being so taken away, they can never more joyn in copulation; and these are more patient in labour and thirst, and likewise better endure the extremity of sand in those parts, having this skill, that if the milks of rain or sand, do never so much obscure the way from the rider, yet doth he remember the same without all flagging.

The urine of this beast is excellent for the use of Fullers; of the hair called *Baber*, or Camels Wool, is cloth made for Apparel, (called *Camelote*, or Camels hair.) and the hair of the *Calpian* Camels is so soft, that it may be therein compared with the softest *Milejian* Wool, whereof their Princes and Priests make their garments: and it is very probable, that the garments of Saint *John Baptist* was of this kinde. In the City of *Calacia*, (under the great *Cham*) and in the province of *Egrygate*, is cloth made of the hair of Camels, and white wool (called *Zambiloti*) shewing most gloriously; but the best of this kinde are in the land of *Gog* and *Magog*.

It is forbidden in holy Scripture to eat a Camel, for although it chew the cud, yet is not the hoof altogether cloven; and besides, the flesh thereof is hard of digestion, and the juice thereof very naught, heating the body above measure; yet many times have men of base condition and mindes eaten thereof, as in *Arabia*, and in the Kingdom of *Fenexen*, and *Abenens* affirmeth, that the King of *Persia* was wont to have a whole Camel roasted for his own table at his royal feastings; and *Heliogabals* likewise caused to be prepared for himself the heels of Camels, and the spurs of Cocks and Hens, pulled of alive, and whole Oltriches and Camels; saying, (though falsely) that God commanded the *Jews* to eat them. Camels milke is wholesome for meat, because it is thinnest of all other, and because thereof it breedeth fewer obstructions, and is good for softning of the belly. For the natural disposition of this beast: it is partly already related, whereby the singular use thereof may be collected: yet there are certain proverbs and stories thereof farther exprelling their qualities.

It is disdainful, and a discontented creature: whereupon it is said of the Poets, that they be sought *Jupiter* to give them Horns, with which Peticion he was so offended, that he took from them their ears, and therefore in that, those are reproved, which are so far in love with other things they want, that they deserve to lose the things they have. Likewise the wantonness thereof appeareth by the proverb of a dancing Camel, when one taketh upon him more then his skill will serve to discharge: yet hath not this beast been free from ignominy; for when the Emperor *Iustinian* had found the Treason of *Aspases* the *Armenian*, he caused him to ride through the City upon a Camel, to be shamed for his offence, although in former times it was a kinde of triumph and honor to be carryed upon a Camel, led through a City.

In the lake of *Asphaltites*, wherein all things sink that come in it, many Camels and Bulls swim through without danger. The *Arabians* sacrifice a Camel to the unknown God, because Camels go into strange Countries, and likewise sacrifice their Virgins before they be married, because of the chastity of this beast, and the *Sagrentes* with great observance, keep the combat of Camels, in the honour of *Minerva*.

These Beasts are hated of Horses and Lyons, for when *Xerxes* travailed over the river *Chidorus*, through *Pennis* and *Crestonia*; in the night time the Lyons defended into the camp, and touched no creatures therein, except the Camels, whom they destroyed for the most part.

A Camel will live in the soil wherein he is bred, fifty or an hundred years; and if he be translated into any other Nation, he falleth into madness or scabs, or the gowt, and then they live not above thirty years. There is a kinde of grass that groweth by the high ways in the Countrey of *Babylon*, that killeth Camels when they taste thereof.

There are also medicinal properties in Camels, for by reason he is of a hot and dry temperance: if a man infected with poyson, be put into the warm belly of a Camel newly slain, it looseth the power of the poyson, and giveth strength to the natural parts of the body. The fat taken out of the bunch and perfumed, cureth the Hemorrhoides; and the blood of a Camel fried, is precious against the bloodyflux, or any other loosens of the belly; the brain dried and drunk with Vinegar, helpeth the Falling-evil; the gall drunk with Hony, helpeth the Quinzy; and if it be laid to the eye-brows and forehead, lod in three cups of the best Hony, it cureth the dimmes of the eyes, and avoideth the flesh that groweth in them: and if the hairs of a Camels tail be wound together like a string, and tyed to the left arm, (*Pliny* affirmeth) they will deliver one from a quartan Ague.

The milke of Camels newly delivered of young, helpeth obstructions, and all thornes of breath; and is also good against the Drop sic and hardness of the milke. Also when one hath drunk poyson, this is a good Antidote, and amendeth the temper of the body. The fime of Camels dried to dust with Oyl, will crisp and curl the hair, and stay bleeding at the nose; and the same hot, is good against the Gowt.

The urine is most profitable for running sores, there have been which have preferred it five years together, and used against hardness of the belly; washing also therewith sore heads: and it helpeth one to the sense of smelling, if it be held to the nose; likewise against the Drop sic, the Spleen, and the Ring-worm.

Of the use of  
their natural  
parts.  
Zellianus.

The flesh of a  
Camel not to  
be eaten.  
Diodorus.  
Leo Afric.

Lampridius.

A history of  
their natural  
disposition.  
Celsus.

Calvus.  
Solinus.

Sacrifices of  
Idolaty.  
Gyradius.

Elianus.  
Of the fear and  
hated of Ca-  
mels.

Herodotus.  
Solinus.

Porphyrius.  
The length of  
their life.  
Pliny.

The medicines  
in the bodies  
of Camels.  
Fozzetius.  
Cardinalis.  
Avicenna.

Marcellus.

## Of the Camel-DROMEDARY.

The description of a Dromedary, and the Etymology of his name.

**A** Camel is called of the *Grecians*, *Dromas*, by reason of the swiftness of his race; and also an *African* Camel, which hath all things common with the former *Babrian* Camel, except, first in the shape, for he hath but one bunch on the back, land many Nations, as the *Italians*, *French*, *Germans*, and *Spaniards*, use the word *Dromedary*, only without addition; the *Grecians* never name it without the addition of a Camel. Therefore this is a kind of Camel of less stature, but much swifter; for which cause it is derived from running. It cheweth the cud like a Sheep, and the other Camel: the *Arabian* King had sent him from the great *Turk* two of these, white coloured; and I my self have seen one of them, being fifteen cubits high, wanting some nine inches, and two broad nails in his feet, which in the having the upper lip cloven in the middle like a Hare, and two broad nails in his feet, which in the upper part appeared cloven, but underneath they were whole and fleshy without division, and round in proportion like a pewter dish: It hath also a hard bunch on its breast, whereon it leaned, sitting down and rising: and also upon either knee one: these are said to live fifty years; but the *Babrian* an hundred: they were used for drawing of Chariots, and great presents for Princes; and when they go to war, every one carryeth two Archers, which sit upon him, back to back, shooting forth their darts, one against the front of the enemy, and the other against the persecutors and lowers.

*Dilysmus*.  
*Isidorus*.  
A History.

*Elanus*.

*Diogenes*.

They are able to go an hundred miles in a day, bearing a burthen of fifteen hundred weight; yea sometimes two thousand, bending upon his knee to take up his load and rider, which received, he riseth up again with great patience, being obedient and ruleable; yet kicking when he is angry, which is very seldom: and therefore *Terence* did significantly describe a good servant by the name of *Dromo*, derived from *Dromas*, a runner: And for the conclusion of the History of these two sorts of Camels, I will here adde the relation and memorable observations of *Johannes Leo Afer*, in his ninth Book of the description of *Africa*, in his own words following.

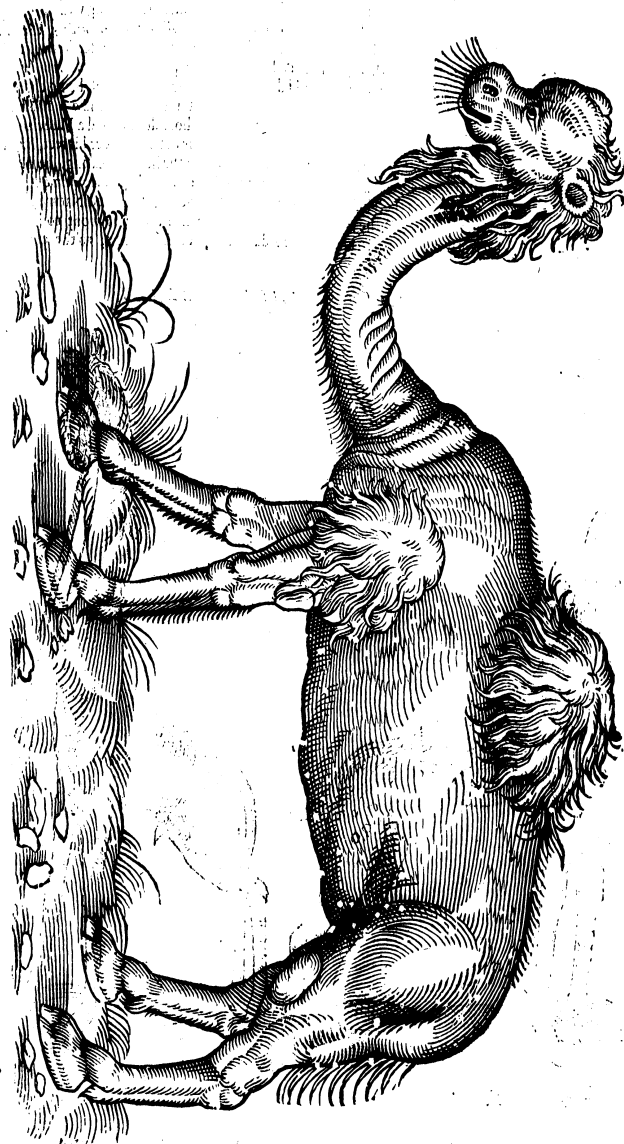
A relation of *Joh. Leo Afer*, out of his ninth Book, of the description of *Africa*.

“A Camel is a gentle and pleasant tame beast, whereof there are plenty in *Africa*, especially in the Deserts of *Lybia*, *Numidia*, and *Barbary*: by which *African* estimate their own wealth; for when they contend who is the richest Prince or Noble-man among them, they say he was worthy, or hath to many thousand Camels, and not so many thousand Crowns. And he that hath Camels, liveth among them like a Gentleman; because he can at his pleasure travel into the Deserts, and fetch Merchandize from far, which the greatest Prince or Noble-man cannot without them, by reason of the drought of those places. And of these kind of creatures, there are to be seen in all parts of the world, both in *Asia*, *Africa*, and *Europe*; for the *Partians*, *Cordians*, *Dalmatians*, and *Turcomans* use them in *Asia*; and the *Turkish* Princes convey all their carriages upon them in *Europe*: Likewise do all the *Arabians* in *Africa*. But it must be observed, that the *African* Camels are much more worth then the *Asian*, for they can endure travel for forty and fifty days together, with very little or no meat, except sometimes in the evening, when they are unloaded, they go to the hedges, thorns, and other green places, and there eat any small thing they meet withall, as leaves and such like, wherewith they remain satisfied, whereas the *Asian* can perform no such journey, except they be kept fat and well fed: and it hath been proved by good experience, that one of the *Africans* hath travelled fifty days without meat, first wearing away the fat in their bunched back, then about their skin and breast, and lastly, about their ribs, never giving over till it was not able to bear one hundred weight.

“But the *Asians* must alway carry provender to sustain their beasts, never travelling but they have one Camel laden with meat, for the other laden with carriage, and so endure a double charge: and when the *Africans* go to any Marts or Fairs being to return empty and unloaded, they take no thought for their Camels food. Of these Camels there be three kinds, one of them called *Hugian*, (being broad and tall) and therefore apt to bear packs and burthens, but not before they be four year old, and after their ordinary load is one thousand weight of *Indian* measure, being taught by the jerking of a small rod, on the breast or knees, to lie down for their burthens, and afterward to rise up again. And the *Africans* do use to geld their Camels, reserving but one male for the covering of ten females.

“Another kind of their Camels they call *Sebetos*, such as have two bunches, one for burthen, and the other for a man to ride upon: and the third sort are called *Raghabils*, which are of lower stature and leaner bodies then the residue, unfit for burden, and therefore are used for the saddle, by all the Noblemen of *Numidia*, *Arabia*, and *Lybia*: being able to run an hundred miles a day, and performing long journeys with little or no provender: for the King of *Tombuto* being to send to *Dara*, or *Scimessa*, (which is distant from his Court nine hundred miles) his messenger performeth it upon one of these *Raghabils*, within the space of eight days.

“In the beginning of the Spring they are most frolic and unruly, because then they incline to generation: at which time, they rage and fall upon many that come unto them, and especially those from whom they have received blows, remembering at that time, and requiring their former injuries, upon such as wronged them, whom if they can take in their mouth, they lift them up into the

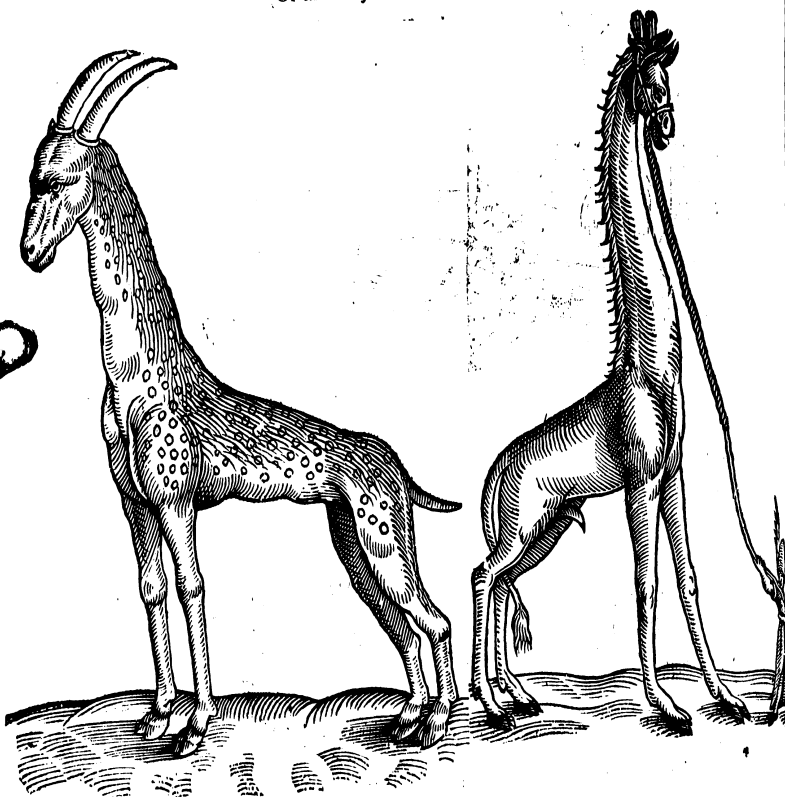


the air, and then cast them down again under their feet, and tread upon them, in which dispersed venereous fury, they remain forty days.

They can easily endure thirst, five, nine, or fifteen days in necessity; neither will their keeper give them drink at three days thirst, for fear to harm them. As these Camels are pleasant and profitable; so also they seem to participate with the nature of man; for they being wearied, no spur or stroke can make them hasten to their journey end, therefore in *Aethiopia* and *Barbary*, they sing certain songs behind the Beast, which so revive their decayed spirits, that they set forward so fast, forgetting their tyred limbs, to their journey end, that their keepers can hardly follow.

I have also seen in *Alcivis*, a Camel, that could dance at the sound of a Timbrel, being thereunto taught when he was young by this means; first, he was brought into a room like a stable, the pavement whereof was made hot by a fire underneath it, and without doors stood a Musician playing on his Timbrel; the Camel, not for love of the music, but for the heat under his feet, lifted up his first one foot, and then another, as they do which dance, and so the heat increasing, he likewise did lift up faster, whereunto he was accustomed for the space of ten months; at every time one hour and a half, during which time the Timbrel still sounded; so that at last, the framed Nature to such a strain, that hearing a Timbrel, he instantly remembered the fire that was wont to punish his feet, and so presently would leap to and fro like a dancer in public spectacle; to the admiration of all beholders.

### Of the two sorts of CAMELOPARDALS.



Of the name. This Beast is called in Hebrew, *Zamir*; Deut. 14. which the *Arabians* translate *Saraphab*, and sometime *Gyrapha*, *Gyrassa*, and *Zirafa*; the *Chaldeans*, *Deba*, and *Ana*; the *Persians*, *Seraphab*; and the *Septuagint Grecians*, *Camelopardalis*, which word is also retained by the *Latins*, whereunto

Alberius

*Albertus* addeth *Oraflus*, and *Oraflus*. The *Ethiopians* call it *Nabin*, from whence cometh *Anabula*, and *Jul. Capitol. Paulinus* translate it an *Indian Sheep*, so indeed *Anabula* may be *Enelish'd* a wilde Sheep.

There were ten of these seen at *Rome*, in the daies of *Gratianus* the Emperor, and before that time, *Caesar* being Dictator. And such an one was sent by the *Sultan of Babylon* to the Emperor *Fredrick*, so that it is without question that there is such a beast, which is engendred of a Camel and a female *Libard*, or *Pambur*, as *Horace* saith;

### *Diverjum confusa genus Pambura Camelo.*

But the same which the *Latins* call *Pambura* the *Grecians* call *Pardalis*. The head thereof is like to a Camel, the neck to a Horse, the body to a Hart; and his cloven hoof is the same with a Camel; the colour of this Beast is for the most part Red and white, mixed together, therefore very beautiful to behold, by reason of the variable and interchangeable skin, being full of spots: but yet they are not away of one colour. He hath two little horns growing on his head of the colour of iron, his eyes rowling and frowning, his mouth but small like a Harts, his tongue is near three foot long, and with that he will so speedily gather in his meat, that the eyes of a man will fail to behold his halt, and his neck diversly coloured, is fifteen foot long, which he holdeth up higher then a Camel, and far above the proportion of his other parts. His forefeet are much longer then his hinder and therefore his back declineth towards his buttocks, which are very like an *Asses*. The pace of this beast differeth from all other in the world, for he doth not move his right and left foot one after another, but both together, and so likewise the other, whereby his whole body is removed at every step or strain.

These beasts are plentiful in *Ethiopia*, *India*, and the *Georgian* region, which was once called *Media*. L'kewise in the Province of *Abasia* in *India*, it is called *Surnoja*, and in *Abasia*, *Surnappa*, and the latter picture before set down, was truly taken by *Melchior Lorizius* at *Constantinople*, in the year of salvation 1559. by the sight of one of these, sent to the great *Turke* for a present; which picture and description, was afterward sent into *Germany*, and was imprinted at *Norimberge*. It is a solitary beast, and keepeth altogether in woods, if it be not taken when it is young: they are very tractable and easie to be handled, so that a child may lead them with a small line or cord about their head, and when any come to see them, they willingly and of their own accord turn themselves round as it were of purpose to shew their soft hairs, and beautiful colour, being as it were proud to ravish the eyes of the beholders.

The skin is of great price and estimation among Merchants and Princes, and it is said that underneath his belly, the colourable spots are wrought in fashion of a fishers net, and the whole body so admirably intercoloured with variety, that it is in vain for the wit or art of man, once to go about to endeavour the emulous imitation thereof. The tail of the beast is like the tail of an *Ass*, and I cannot judge that it is either swift for pace or strong for labour, and therefore well teamed a wilde Sheep, because the flesh hereof is good for meat, and was allowed to the *Jews* by God himself for a clean beast.

### Of the ALLOCAMELUS.



Scaliger



the nails of a Lion, striking with her forefeet, both Dogs and other things, as a man doth with his hand.

The game and food of Cats.

This beast is wonderful nimble, setting upon her prey like a Lion, by leaping, and therefore she hunteth both Rats, all kind of Mice, and Birds, eating not only them, but also fish, where-withall she is best pleased. Having taken a Mouse, the first playeth with it, and then devoureth it, but her watchful eye is most strange, to see with what pace and soft steps, she taketh birds and flies; and her nature is to hide her own dung or excrement, for she knoweth that the favour and presence thereof, will drive away her sport, the little Mouse being able by that fool, to smell the presence of her mortal foe.

Pliny.  
A lecturer.

To keep Cats from hunting of Hens, they use to tie a little wilde Rew under their wings, and so likewise from Dove-coates, if they set it in the windows, they dare not approach unto it for some secret in nature. Some have said that Cats will fight with Serpents, and Toads, and kill them, and perceiving that she is hurt by them; she presently drinketh water and is cured: but I cannot consent unto this opinion: it being true of the Weasel as shall be afterward declared. *Pontezius* sheweth by experience that Cats and Serpents love one another, for there was (saith he) in a certain Monastery, a Cat nourished by the Monks, and suddenly the most parts of the Monks which used to play with the Cat fell sick: whereof the Physicians could find no cause, but some secret poison, affirming that he saw the Abbey-cat playing with a Serpent, which the Physicians understood, presently conceived that the Serpent had emptied some of her poison upon the Cat, which brought the same to the Monks, and they by stroking and handling the Cat, were infected therewith; and whereas there remained one difficulty, namely, how it came to passe, the Cat her self was not poisoned thereby, it was resolved, that for as much as the Serpents poison came from him but in play and sport, and not in malice and wrath, that therefore the venom thereof being lost in play, neither harmed the Cat at all, nor much endangered the Monks: and the very like is observed of Mice that will play with Serpents.

Eliahu.

Cats will also hunt Apes, and follow them to the woods, for in *Egypt* certain Cats set upon an Ape, who presently took himself to his heels, and climbed into a tree, after whom the Cats followed with the same celerity & agility: (for they can fasten their claws to the barks and run up very speedily;) the Ape seeing himself overmatched with number of his adversaries, leaped from branch to branch, and at last took hold of the top of a bough, whereupon he did hang so ingeniously, that the Cats durst not approach unto him for fear of falling, and so departed.

The love of home.

The nature of this beast is, to love the place of her breeding, neither will she tarry in any strange place, although carried far, being never willing to forsake the house, for the love of any man, and most contrary to the nature of a Dog, who will travaile abroad with his master; and although their masters forsake their houses, yet will not these beasts bear them company, and being carried forth in close baskets or sacks, they will yet return again or lose themselves. A Cat is much delighted to play with her imagin in a glass, and if at any time she behold it in water, presently she leaped down into the water which naturally she doth abhor, but if she be not quickly pulled forth and dried the dyeth thereof, because she is impatient of all wet. Those which will keep their Cats within doors, and from hunting birds abroad, must cut off their ears, for they cannot endure to have drops of rain distill into them, and therefore keep themselves in harbour. Nothing is more contrary to the nature of a Cat, then is wet and water, and for this cause came the proverb that they love not to wet their feet. It is a neat and cleanly creature, oftentimes licking her own body to keep it neat and fair, having naturally a flexible back for this purpose, and washing her face with her forefeet: but some observe, that if she put her feet beyond the crown of her head, that it is a presage of rain, and if the back of a Cat be thin the beast is of no courage or valour. They love fire and warm places, whereby it often falleth out that they often burn their Coats. They desire to lie soft, and in the time of their lust (commonly called cat-wralling) they are wilde and fierce, especially the males, who at that time (except they be gelded) will not keep the house: at which time they have a peculiar direful voice. The manner of their copulation is this, the female lyeth down, and the male standeth, and their females are above measure desirous of procreation, for which cause they provoke the male, and if he yeeld not to their lust, they beat and claw him, but it is only for love of young, and not for lust: the male is most libidinous, and therefore seeing the female will never more engender with him during the time her young ones suck, he killeth and eateth them if he meet with them, (to provoke the female to copulation with him again, for when she is deprived of her young, she seeketh out the male of her own accord) for which the female most warily keepeth them from his sight. During the time of copulation, the female continually cryeth, whereof the Writers give a double cause; one, because she is pinched with the talons or claws of the male in the time of his lustful rage; and the other, because his seed is so fiery hot, that it almost burneth the females place of conception. When they have littered, or as we commonly say kittened, they rage against Dogs, and will suffer none to come near their young ones. The best to keep are such as are littered in *March*; they go with young fifty daies, and the females live not above six or seven years, the males live longer, especially if they be gelt or libbed: the reason of their short life is their ravening of meat which corrupteth within them.

Choice of young Cats.

They

They cannot abide the favour of ointments, but fall mad thereby; they are sometimes infected with the falling evil, but are cured with *Gubium*. It is needles to spend any time about her loving nature to man, how she flattereth by rubbing her skin against ones Legs, how the whurleth with her voice, having as many tunes as turnes, for she hath one voice to beg and to complain, another to tellise her delight and pleasure, another among her own kind by flattering, by hilding, by puffing, by spitting, in so much as some have thought that they have a peculiar intelligible language among themselves. Therefore how the begger, playeth, leapeh, looketh, catcheth, lieth with her foot, riseth up to strings held over her head, sometimes creeping, sometimes toying on the back, playing with one foot, sometime on the belly, snatching now with mouth, and anon with foot, apprehending greedily anything save the hand of a man, with divers such gestical actions, it is needles to stand upon; in so much as *Calius* was wont to say, that being free from his Studies and more urgent weighty affaires, he was not ashamed to play and sport himself with his Cat, and verily it may well be called an idle mans pastime. As this beast hath been familiarly nourished of many, so have they payed dear for their love, being requited with the losse of their health, and sometime of their life for their friendship: and worthily, because they which love any beast in a high measure, have so much the lesse charity unto man.

Therefore it must be considered what harmes and perils come unto men by this beast. It is most certain, that the breath and favour of Cats confound the radical humour and destroy the lungs, and therefore they which keep their Cats with them in their beds have the air corrupted, and fall into several Hecticks and Consumptions. There was a certain company of Monks much given to nourish and play with Cats, whereby they were so infected, that within a short space none of them were able either to say, read, pray, or sing, in all the Monastery; and therefore also they are dangerous in the time of Pestilence, for they are not only apt to bring home venemous infection, but to poison a man with very looking upon him; wherefore there is in some men a natural dislike and abhorring of Cats, their natures being so composed, that not only when they see them, but being near them and unseen, and hid of purpose, they fall into passions, frettings, sweating, pulling off their hats, and trembling fearfully, as I have known many in *Germany*; the reason whereof is, because the constellation which threatneth their bodies which is peculiar to every man, worketh by the presence and offence of these creatures: and therefore they have cryed out to take away the Cats.

The like may be said of the flesh of Cats, which can seldom be free from poison, by reason of their daily food, eating Rats and Mice, Wrens and other birds which feed on poison, and above all the brain of a Cat is most venomous, for it being above measure dry, stoppeth the animal spirits, that they cannot passe into the ventricle, by reason whereof memory faileth, and the infected person falleth into a Phrenzie. The cure whereof may be this, take of the water of sweet Marjoram with *Terra lemnia* the weight of a groat mingled together, and drink it twice in a month, putting good store of Spices into all your meat to recreate the spirits withall, let him drink pure Wine, wherein put the seed of *Diamosfu*. But a Cat doth as much harm with her venomous teeth, therefore to cure her biting, they prescribe a good diet, sometime taking Honey, Turpentine, and Oil of *Roses* melt together and laid to the wound with *Cenury*: sometime they wash the wound with the urine of a man, and lay to it the brains of some other beast and pure Wine mingled both together.

The hair also of a Cat being eaten unawares, stoppeth the Artery and causeth Suffocation: and I have heard that when a childe hath gotten the hair of a Cat into his mouth, it hath so cloyen and stuck to the place that it could not be gotten off again, and hath in that place bred either the wens or the Kings evil. To conclude this point, it appeareth that this is a dangerous beast, and that therefore as for necessity we are constrained to nourish them for the suppressing of small vermin: so with a wary and discreet eye we must avoid their harm; making more account of their use then of their persons.

In *Spain* and *Gallie* *Narbow*, they eat Cats, but first of all take away their head and tail, and hang the prepared flesh a night or two in the open cold air, to exhale the favour and poison of it; finding the flesh thereof to be as sweet as a Cony. It must needs be an unclean and impure beast that liveth only upon vermin and by ravening, for it is commonly said of a man when he needeth, that he hath eaten with Cats: likewise the familiars of Witches do most ordinarily appear in the shape of Cats, which is an argument that this beast is dangerous to soul and body. It is said that if bread be made wherein the dung of Cats is mixed, it will drive away Rats and Mice. But we conclude the story of this beast with the medicinal observations, and tarry no longer in the breath of such a creature compounded of good and evil. It is reported that the flesh of Cats salted and sweetened hath power in it to draw wens from the body, and being warmed to cure the Hemorrhoids and pains in the reins and back, according to the Verse of *Ursinus*.

*Et lumbis lumbis praestat adejus opem.*

*Ajfw* prescribeth a fat Cat sod for the Gowt, first taking the fat, and anointing therewith the sick part, and then wetting Wool or Tow in the same, and binding it to the offended place. For the pain and blindness in the eye, by reason of any skins, webs, or nails, this is an approved medicine; Take the head of a black Cat, which hath not a spot of another colour in it, and

*Gilvus.*  
*Calius.*  
*Alu. Mundel.*  
*Their diseases.*

The hurt that cometh by the familiarity of a Cat.  
*Al. x. Buidi.*  
*Ajfwor.*

Of a Cat's flesh

*Pontezius.*  
*Alexander.*

*Matheolus.*

*Proutus.*

*Galenus.*  
The medicinal virtues of a Cat.

and burn it to powder in an earthen pot leaved or glazed within, then take this powder and through a quill blow it thrice a day into thy eye, and if in the night time any heat do thereby annoy thee, take two leaves of an Oke wet in cold water and bind them to the eye, and so shall all pain flee away, and blindness depart although it hath oppressed thee a whole year: and this medicine is approved by many Physicians both elder and later.

Calen.

Sextus.

Artus.

Rosis.

Albertus.

Pliny.

The liver of a Cat dried and beat to powder is good against the stone: the dung of a female Cat with the claw of an Owl hanged about the neck of a man that hath had seven fits of a Quartain Ague, cureth the same: a needling powder made of the gall of a black Cat, and the weight of a groat thereof taken and mingled with four crowns weight of Zambach, helpeth the convulsion and wrynes of the mouth: and if the gall of a Cat with the black dung of the same Cat, be burned in perfume under a woman travelling with a dead child, it will cause it presently to come forth: and Pliny saith that if a pin, or thorn, or fish bone, stick in ones mouth, let him rub the outside against it with a little Cats dung, and it will easily come forth. Given to a woman suffering the flux, with a little Rozen and Oil of Roses, it slayeth the humour; and for a Web in the eye of an horse, evening and morning blow in the powder of Cats dung, and it shall be cured.

## Of the Wilde CAT.

Al Cats at the beginning were wilde, and therefore some do interpret *Iim*, Isa. 34. for wilde Cats; and the *German* call it *Baumrueter*, that is, a tree-rider, because the hunteth Birds and fowles from tree to tree. The *Spaniard* calleth it *Cato-monte*, and in some places of *France* it is called *Chatoars*. There are great store of them in *Helvetia*, especially in the Woods, and sometime near the waters, also being in colour like tame Cats but blacker, such as in *England* is called a *Poolet*. I saw one of them, which was taken in *September*, and observed, that it was in length from the forehead to the top of the tail, four full spans, and a black line or strake all along the back, and likewise black upon the legs; betwixt the breast and the neck there was a large white spot, and the colour of her other parts was dusky, red, and yellow, especially about the buttocks, the heels of her feet were black, her tail longer than an ordinary house Cats, having two or three black circles about it, but toward the top all black.

Olani Mag.

They abound in *Scandinavia*, where the *Linxes* devour them; otherwise they are hunted with Dogs, or shot with Guns, and many times the Countrey men seeing one in a tree, doth compass it about with multitude, and when she leapeth down kill her with their cubs; according to the verse of *Nicetas*:

Felleque minacem

Arboris in sinu, longis perfugere tellis.

0120

In the province of *Malabar*, these Cats live upon trees, because they are not swift to run, but they with such agility that some have thought they did fly: and verily they do fly, for they have a certain skin, which when they lie in quiet, cleaveth or shrinketh up to their bellies, but being stirred, the same spreadeth from their forefeet to their hinder, like the wing of a Bat; by vertue whereof they stay up themselves in the air, passing from tree to tree like a fowl; as also doth the *Pomique* Mouse, as shall be declared afterward.

The skins of wilde Cats are used for garments, for there is no skin warmer, as by experience appeareth in *Syria* and *Moscowia*, where their women are clothed with the fur of Cats, but especially for buskins and sleeves with their hair turned inward, not only against cold but for medicine, against contracted sinews, or the Gout: The fat of this beast is reserved by some for heating, sometimes to displaying tumours in the flesh: and whatsoever *Rasfs* or any other said of the house Cat, herein, that the virtues of the wilde kind is more effectual then the tame.

There are some among the *Arabians* and *Germans*, which eat the flesh hereof, accounting it delicate, having first cut off the head and tail: they cannot abide the fume of *Rew*, or of bitter Almonds; there is nothing memorable in the nature of this beast that I can learn, except that which is related by *Aetius*, that when men are bitten by Crocodils, this beast by a natural instinct hating a Crocodile, will come about the wounded persons; otherwise fearing the presence of man.

We may hereunto add the beast which is bred in *America*, called *Hoyrat*, spoken of by *Theophrastus*: which name significeth a beast of Honey, and the reason is, because it desireth Honey above measure, for it will climb the trees, and coming to the caves of Bees, it will with such dexterity take out the Honey with their nails, that it neither hurteth the Bees, or receiveth harm by them. It is about the bigness of a Cat, and of a Cheff-nut colour.

## Of the COLVS.



There is among the *Syrians* and *Sarmatians* a four-footed wilde beast called *Colus*, and some *Sulac*. The name in *Latin*; of the *Polonians*, *Suhac*, of the *Moscovites*, *Stigak*; of the *Tartarians*, *Akkuk*, and *Snak*; of the *Turkes*, *Asimi*; being in quantity and stature betwixt a Ram and a Hart, and duskie white coloured, but the young ones yellow: of a singular swiftness and celerity in course. Her manner is to drink by the holes in her Nostrils, whereby the smooth up abundance of Water, and carryeth it in her head, so that she will live in dry pastures remote from all moisture a great season, quenching her thirst by that Cistern in her head.

They are most plentiful to be found in *Tartaria*, in *Paria*, where are so many plains, that a man can see nothing but heaven and earth; likewise they are found in *Mysenia*, in *Padacia*, and about the River *Nepis*, and *Bosphorus*: they can never be taken but by wearisomeness: wherefore if men follow them with Pipes and Timbrels, playing upon them, they so weary themselves with leaping and running to and fro, being compassed in by multitudes of men, that they fall down for weakness, and so are taken. They live in flocks together, sometimes five hundred, and after Easter in the Spring, two hundred in a troope: having a Snout like a Hogs, they endure much hunger, but no cold.

In March they dig up with their Horns a certain root, whereof they eat, and presently their lust for generation encreaseth unto rage; in so much that for satisfying thereof they continue in that act both male and female, untill they lose all strength of body, lying half dead on the earth by the space of 24 hours, not able to go or stand: during which time they are often taken alive, but when they come again to themselves, they rather die then endure to be tamed.

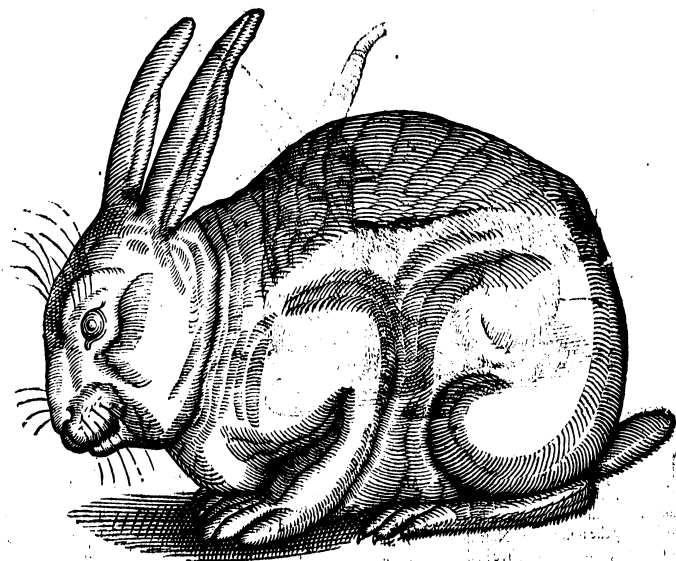
The flesh of them is very sweet and wholesome; they conceive and bring forth for the most part twins, or two at a time; their greatest enemy is a Wolf (for in the Winter and snow they hunt and kill them.) Their horn are about four palms in length, growing upright or bending very little and very sharp, wherewithal they can pierce the belly of a Horse or other beast that standeth over them: at the root they are about six inches compass, and so growing lesse and lesse to the top: one of them weigheth about nine ounces; the blade toward the point is transparent, being held against the light or sun, because it is white and thin, but the neather part is duskie and thicker, and therefore it is not penetrable by the eye of man. There are about 14 circles like rings compassing about the horn, one above another, but the uppermost is not perfect. This horn is of great price, being a present for any Noble man, for in *Turkey* they are sold for six *Cracman* shillings; yet I know no other use of them, but either to make hafts for knives, or else horns for Spectacles.

This beast liveth altogether in the plains except in snow, and then he runneth into the Woods; where he may be taken more easily, and killed with the stroke of a Staffe. When the *Tartarians* know in what plains they lie, their King cometh with a multitude of men compasseth them and wearyeth them by muck as afore said. All this was related to me by one that had killed of them above two hundred with his own hand (saith that right honorable and most learned Gentleman *Johannes Bonatus*, Baron of *Balsae* a *Polonian*.)

Mat. Michol



## Of the CONY.



**A**mong the divers kinds of Hares, Conies have the third rank, being therefore called in Latin, *Lepusculi*, (as it were little Hares) and sometimes *Leporidae*, as it were a Leveret or young Hare, as well as *Cuniculus*: whereof the reason is, that it maketh holes in the earth, for *Cuniculus* was a Latin word for a hole or cave in the earth, before it was taken for a Cony. *Scaphan* in the singular, and *Schephanim*, in the plural, *Levit. 11.* and *Psal. 104.* is taken in *Hebrew* for a Cony or Conies; and not for a Hedge-hog, as the *Septuagint* translate, or for a *Porcysine*, although they live also in Caves and secret places of the earth; and therefore *Chœrogilum*, or *Chœrogilium*, or *Chœrogilium*, cannot signifie a Cony: as the *Septuagint* translate *Scaphan*, but a Hedge-hog, as the word derived from the face of a Hog doth most evidently declare, which can by no means agree with a Cony. In the 14. of *Deut.* the word *Scaphan* is joyned with a Hare, because it is a beast neer of kind unto it, for it is evident, that both of them chew the cud, howsoever a Cony hath not a simple cloven foot into two parts. A Cony also is called *Adaper*, because of the roughness of his feet: The *Chaldei* calleth it *Teapla*; the *Arabians*, *Vebar*; the *Persians*, *Begauazab*; and the *Arabians*, following sometime the *Greeks*, call it *Alranek*, that is, Hares. The *Grecians* call it vulgarly *Skete* and *Dafiper*, *Cuniculus*, *Scunax*, and *Lagis*, *Georgians* a Hare digging, living in the earth. The *Italians* call it *Conigli*, the *French*, *Coulin*; the *Spaniards*, *Concio*; the *Germans*, *Kinnigle*, or *Kunel*, and sometime *Kunlein*; the *Illyrians*, *Kralik* or *Kroluk*.

There are few Countries wherein Conies do not breed, but the most plenty of all is in *England*, they are also in an Island where are but few men neer unto *Dicaeroba*, or as it is now called *Puteoli* in *Italy*. Likewise in all *Spain*, especially in those parts neer unto *Lombardy*, whereupon *Apian* in *Vatro* did write to one of his acquaintance which had tarried long in *Spain*, that he thought he was there following or hunting of Conies, because of their multitude is great, so it would aske long time to take them. Among the *Balkares* are also great flocks of Conies, and once they so abounded there, that the people were constrained to retreat at the hands of *Augustus*, a military company of Pioneers to destroy them; and when *Camillus* was besieging the City *Vetri* in *Italy*, he learned of the Conies, which had undermined a whole City in *Spain*, likewise to take and overthrow that City by their example of undermining, whereupon *Martial* said:

*Manfravit tactus hostibus ille visis.*

*Vegetius* saith, that the proverb *Cuniculos agere* took his beginning, when one by secret underminings, and not by open violence overthroweth a Town or Nation. There are also, saith *Albertus*,

*Albertus*, great flocks of wilde Conies in *Bohemia*, so like a Hare as one beast may be like another, save only they seem stronger, and are shorter and lesser, which thing caused *Baptista Fiera* to write thus:

*Credideram leporem, sic forma similima fallit,  
Ambo superfatam, dente vel aure parat.*

*Pet. Martyr* likewise affirmeth in his *Ocean Deader*, that in *Curiana* a region of the new found world, are Conies for colour, quantity, and hair like a Hares, which the inhabitants call *Vniar*, and there are two little Islands called *Cunicularia*, which seem to be denominated of Conies, standing betwixt *Cosica* and *Sardinia*. For their several parts, they are most like unto a Hare, except in their head and tail which is shorter, and their colour which is alway brighter, and less brown and sandy: or else sometimes Conies are white, black, griseled, tawny, blewish, yellow spotted, ash-coloured and such like. And *Absius* saith, that in some places, they are also green, and their skins are of great use through the world, especially in all the North and East for garments, facings, and linings. The gray and yellowish are the worst, but the white and black are more pretious, especially of the *English*, if the black be aspered with some white or silver hairs: and in their use the Bucks are most durable, yet heavier and harsher. The belly is most soft, gentle, and easie, and therefore more set by, although of lesse continuance. Their flesh is very white and sweet, especially of the young ones, being about fourteen or twenty dayes old, and some have devised a cruel delicate meat, which is their flesh, to cut the young ones out of the dams belly, and so to dress and eat them, but I trust there is no Pliny man among Christians so inhumanely gluttonous, as once to devise or approve the sweetness of so foul a dish: but the tame ones are not so good, for in *Spain* they will not eat of a tame Cony, because every creature doth partake in taste of the air wherein he lieth, and therefore tame Conies which are kept in a close and unweet air, by reason of their own excrements, cannot taste so well, or be so wholesome as those which run wilde in the mountains and fields, free from all infection of evill air.

They love above all places the rocks, and make Dens in the earth, and whereas it is said, *Psal. 104* that the stony rocks are for the Cony, it is not to be understood as if the feet of the Cony could pierce into the rock, as into the earth, and that the digger her hole therein as in looser ground; but that finding among the rocks holes already framed to her hand, or else some light earth mingled therewith, she more willingly entrencheth thereinto, as being more free from rain and floods then in lower and softer ground; for this cause they love also the hills and lower grounds and woods where are no rocks, as in *England* which is not a rocky Countrey, but whereof ever she is forced to live, there the digger her holes, wherein for the day time she abideth, but morning and evening cometh out from thence, and sitteth at the mouth thereof.

In their copulation they engender like Elephants, Tygres, and Linxes, that is, the male leapeth on the back of the female, their privie parts being so framed to meet one another behind, because the females do render their urine backward: their secrets and the feed of the male are very final. They begin to breed in some Countries being but six monthes old, but in *England* at a year old, and so continue bearing every month, at the least seven times in one year, if they litter in *March*, but in the Winter they do not engender at all; and therefore the Authors say of these and Hares, that they abound in procreation, by reason whereof, a little flock will serve to encrease a great borough. Their young being littered are blind and fee not till they be nine dayes old, and their dam hath no suck for them, till she hath been six or seven hours with the male, at the least for six hours after she cannot suckle them, greatly desiring to go to the Buck and if she be not permitted presently, she is so far displeased that she will not be so inclined again for 14 daies after.

I have been also credibly informed by one that kept tame Conies, that he had Does which littered three at a time, and within fourteen daies after, they littered four more. Their ordinary number in one litter is five, and sometimes nine, but never above: and I have seen that when a Doe hath had nine in her belly, two or three of them have perished and been oppressed in the womb by suffocation. The males will kill the young ones, if they come at them like the Bore cats, and therefore the female doth also avoid it carefully, covering the nest or litter with gravel or earth, that so they may not be discovered: there are also some of their females very unnatural, not caring for their young ones, but suffer them to perish, both because they never provide a warm litter or nest for them, as also because they forsake them being littered, or else devour them. For the remedy of this evil, he that loveth to keep them for his profit, must take them before they be delivered, and pull off the hair or flesh underneath their belly, and so put it upon their nest, that when the young one cometh forth, it may not perish for cold, and so the dam will be taught by experience of pain to do the like her self: Thus far *Thomas Gysen* on an *English Poysieau*. For Conies you may give them Vine-leaves, Fruits, Herbs, Grass, Bran, Oatmeal, Mallows, the parings of Apples; likewise Cabbages, Apples themselves, and Lettuce; and I myself gave to a Cony blew Wolfe-bane, which she did presently eat without hurt, but Gallinule and blind Nettle they will not eat. In the Winter they will eat Hay, Oats and Chaffe, being given to them thrice a day: when they eat Greens they must not drink at all, for if they do, it is hazzard but little, and they will incur the Dropick: and at other times they must for the same cause drink but little, and that little must be alway fresh. It is also dangerous to handle their young ones, in the absence of the dam,

Their parts and members.

*Apriid.*  
*Abiawm.*  
The use of their skins;  
*Crescentius*.

The use of their flesh.

The places of their abode.

Their copulation and procreation.  
*Th. Gysen.*

*Th. Gysen.*

The cruelty of the males and of some females.

Their treat and food.

The danger in their meat and drink.

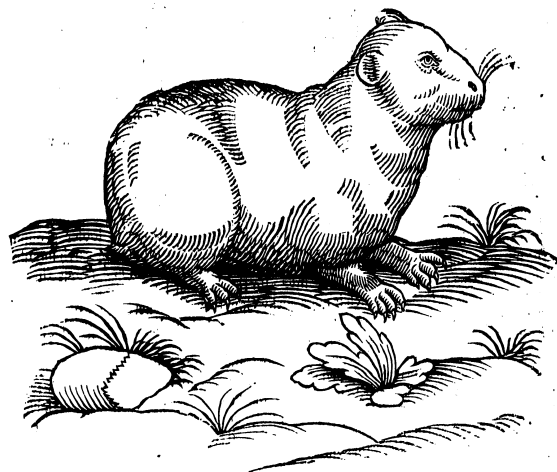
A. S. R. T. U. R.

The medicine  
in a Cony.

for her jealousie will easily perceive it, which causeth her so to disdain them, that either she biteth, forsaketh, or killeth them. Foxes will of their own accord hunt both Hares and Conies, to kill and eat them.

Touching their medicinall properties, it is to be observed that the brain of Conies hath been eaten for a good Antidote against poison: so also the Hart which is hard to be digested, hath the same operation that is in treacle. There is also an approved medicine for the Squinancy or Quinsie: take a live Cony, and burn her in an earthen pot to powder, then take a spoonful of that powder in a draught of wine, and drink the most part thereof; and rub your throat with the residue, and it shall cure with speed and ease, as *Mareellus* saith. The fat is good against the stopping of the bladder and difficulty of urine being anointed at a fire upon the hairy place of the secrets, as *Alex. Benedictus* affirms. Other things I omit concerning this beast, because as it is vulgar, the benefits thereof are commonly known.

Of the Indian little PIG-CONY.



I Received the picture of this beast from a certain Noble-man my loving friend in *Paris*, whose parts it is not needfull to describe, seeing the image it self is perspicuous and easie to be observed. The quantity of this beast doth not exceed the quantity of a vulgar Cony, but rather the body is shorter, yet fuller, as also I observed by those two, which that noble and learned Physician *Job. Munzinger* sent me. It hath two little low ears, round and almost pild without hair, having also short legs, five claws upon one foot behind, and six before; teeth like a mouse, but no tail, and the colour variable. I have seen of them all white, and all yellow, and also different from both those; their voice is much like the voice of a Pig, and they eat all kinds of Herbs, Fruits, Oats, and Bread; and some give them water to drink, but I have nourished some divers moneths together, and never given them any water, but yet I gave them moist food, as Herbs, Apples, Rapes, and such like, or else they would incur the Droptic.

Their flesh is sweet for meat, of a yellowish colour, like the Lard of Swine, and therefore not so white as is our vulgar Cony: they do not dig like other Conies, and for the farther description of their nature, I will express it in the words of *Munzinger* aforesaid, for thus he writeth.

"One of the males is sufficient in procreation for seven or nine of the females, and by that means they are made more fruitful, but if you put them one male to one female, then will the venerous salacity of the male procure abortion. It is affirmed that they go three score daies with young before they litter, and I saw of late one of them bear eight at one time in her womb, but three of them were stifled. They bring forth in the winter, and their whelpes are not blinde as are the Conies. They are no way so harmful as other are, either to bite or dig, but more tractable in hand, howbeit untamable. If two males be put to one female, they fight fiercely, but they will not hurt

"hurt the Rabbits. As the male is most libidinous, so doth he follow the female with a little murmuring noise, bewraying his appetite for generation, without wrath, and these are also called Spanish Conies, by *Peter Martyr*, whose nature except in their abundant superfluousness cometh nearer to Hogs then Conies.

Of the Fallow Deer, commonly called a BUCK and a DOE.



There are some beasts (saith *Pliny*) which nature hath framed, to have horns grow out of their head like fingers out of the hand, and for that cause they are called *Platycorne*: such is this vulgar Fallow Deer, being therefore called *Cervus Palmatus*, that is a palmed Hart, by reason of the similitude the horn hath with the hand and fingers. The Germans call this beast *Dam*, and *Danlin*, and *Dambelitz*. The Italians *Dato* and *Dainio*; the French, *Dain*, and *Daim*. The Spaniards, *Gamo*, and *Goza*, *Cortiza*; the Grecians vulgarly at this day *Agimi*, and *Platogna*; and *Aristotle*, *Prox*; the Latins, *Dama*, and *Damula*, because, *de manu*, that is, it quickly flyeth from the hand of man, having no other defence but her heels; and the female *rocca*, and the *Polonians*, *Lanii*. It is a common beast in most Countries, being as corpulent as a Hart, but in quantity resembleth more a Roe, except in colour. The males have horns which they lose yearly, but the females none at all: their colour divers, but most commonly branded, or sandie on the back, like the furrow of a new plowed field, having a black stripe down all along the back a tail almost as long as a Calves, their bellies and sides spotted with white, which spots they lose in their old age, and the females do especially vary in colour, being

What Hippelaphus is.

being sometimes all white, and therefore like unto Goats, except in their hair which is shorter. The horns of this beast are carryed about every where to be seen, and therefore this is also likely to be the same beast which Aristotle calleth Hippelaphus as some would have it; yet I rather think that Hippelaphus was like to that rare seen horse which Francis the first of that name King of France, had presented unto him for a gift; which was engendered of a Horse and a Hart, and therefore can have no other name then Hippelaphus, signifying a Horse-hart.

Aristotle.  
A secret in the blood.

In the blood of these kind of Deer are not strings or Fibres, wherefore it doth not congeal as other doth, and this is assigned to be one cause of their fearful nature; They are also said to have no gall: in their horns they differ not much from a Harts (except in quantity) and for their other parts they much resemble a Roe-buck; their flesh is good for nourishment, but their blood doth increase above measure melancholy, which caused Hippocrates to write thus of it, after his discourse of the Roe.

*Damula adusta magis sinitris ab ubere rapta est,  
Huius prior in nostro fortis erit orbe locus;*

For the preparation or dressing of a Buck, we shall say more when we come to the description of a Hart. Albertus tranlateth the word *Algazel* a Fallow Deer, and sayeth that the flesh thereof is very hurtful, being cold and dry, and bringeth the Hemorrhoides if it be not well seasoned with Pepper, Cinnamon, Mustard seed, and Hony, or else Garlick, which caused Juvenal to cry out upon the excess of rich men for their feasts and delicate fare, being compared with the Ancients which lived upon fruits, in these words following, as they are left in his eleventh Satyre.

*—Olim ex quavis arbore mensa fiebat,  
At nunc divitiis canendi nulla voluptas:  
Nil Rhombus, nil dama sapit, putere videtur  
Unguentum atque rosa,*

Of the medicines,

The dung or sme of this beast mingled with oil of Myrtles, increaseth hair, and amendeth those which are corrupt. If the tongue hereof be perfumed under a leech or tick that sticketh in the throat of man or beast, it causeth the leech to fall off presently; and the powder of such a tongue helpeth in a Fistula; some of the late writers do prescribe the fat of a Moul, of a Deer, and of a Bear mingled together to rub the head withall for increase of memory.

### Of the second kind of Deer the ROE-BUCKE.

The several names,

There is so great difference among writers about the name of this beast, that it is a difficult and hard matter to set down certainly, in the prime and original tongues, the true and perfect denomination thereof, yet I will endeavour to go as near the mark as can be, by laying together all the probabilities that I find in other, or observe by my self. To begin then with the Hebrew as the fountain of all the residue, they call it *Zebi*, and the feminine hereof *Zebiah*, and therefore in Deut. 14. it is permitted to the Jews to eat; and the plural of the Masculine is *Zebaim*, and of the feminine *Zebaiim*. The Chaldee translation calleth it *Thabia*, which in the AEs of the Apollites cap. 9. is called *Tabitha*, and is interpreted *Dorcus*, a Roe: and sure it is probable that the Hebrews so call a Roe, because of the outward beauty thereof, being full of spots upon a ground or skin of another colour, shewing with great delight pleasant to the beholder, which caused Martial to write this Distichon;

*Delictum parvo donabis dorcada nato,  
Jactans solet hanc mittere turba togas.*

The Persians call this beast *Abu*. The Arabians, *Thabin*, which cometh near to the Chalde word; the Germans *Reeb* or *Rech*, and the male *Rech-bucke*, and the female *Rech-giese*; the Italians, *Serna* or *Sarna*; the French, *Chireau*, and *Chevreuilvaunge*. The Spaniard, *Zotto*, or *Cabrionillo-monte*; the Italians, *Capriolo*, and *Cauriolo* for the male, and *Capriola*, and *Cauriola* for the female.

The Grecians, *Dorcus*, as the Septuagint do every where translate, which Strabo termeth corruptly, *Zorcet*, also *Dora*, *Kemas*, *Nebrow*, and vulgarly as at this day *Zarkadi*; and *Doradlie*, *Doradion*, for a little Roe. The Latins do also use the word *Dorcus* in common with the Grecians, and beside *Caprea* and *Capreolus* for a little Goat, for I do not think that any learned man can find any difference betwixt

The representation both of male & female.



betwixt *Caprea* and *Capreolus*; except in age and quantity. The reason of these two latter names is, because of the likeness it hath with a Goat, for Goats, as we shall shew in their description, have many kinds distinguished from one another in resemblance; but in the horns a Roe doth rather resemble a Hart; for the female have no horns at all.

The reason of the Latine name.



These beasts are most plentiful in *Africk*, beyond the Sea of *Carthage*; but they are of another kinde then those which Aristotle denyed to be in *Africa*: there are also in *Egypt*, and in *Germany*, and in the *Helvetian Alpes*. Likewise in *Catadupa* beyond *Nilus*, in *Arabia*, in *Spain*, and in *Lycia*; and it is to be observed, that the *Lycian* Roes do never go over the *Syrian Mountains*. *Ellianus* doth deliver these things of the *Lycian* Roes, which for the colour and parts of their body may seem to belong to all. They (saith he) are of an admirable velocity or swiftness; but yet inferior to the *Lycian* Horses, their belly is parted with black streaks and drops, and the other parts of their body are of a red yellowish colour, they have long feet, but longer ears, their eyes black; and their horns are an ornament to their heads.

Their swiftness doth not only appear upon the earth, but also upon the waters; for with their feet they cut the waters when they swim as with Oars; and therefore they love the lakes and strong streams, breaking the floods to come by fresh pasture, as Sweet-rushes and Bul-rushes. Their horns grow only upon the males, and are set with six or seven branches, but the scabbles have none, and therefore also they differ in horn from the Fallow-deer: so as they cannot be called *Playcelote*, for their horns are not palmed like a hand, and although they be branchy, yet are they shorter: they differ not much from the common Deer, but in their horn: and whereas the horns of other beasts are hollow toward the root, whereunto entereth a certain bony substance; the horns of these (as Pliny, also of the vulgar Buck and the Elk) are solid, without any such emptiness; only they are full of pores. It hath also been believed, that a Roe doth not change her horns, because they are never found; whereas in truth, they fall off yearly as doth a Harts, but they hide them, to the intent they should not be found.

It hath likewise been thought, a Roe was called in Greek, *Dorcus*; because of the quickness of her sight; and that she can see as perfectly in the night as in the day; and not only for her self, but the sight learned Physicians have observed a certain viscous humor about her bowels, which being taken forth, and anointed upon a mans eyes, which are dark, heavy, and neer blinde, it hath the same per Cant. effect to quicken his eye-sight. It is also said of them, that they never wink, no not when they sleep; Pliny.

Avicen.  
The Countries breeding Roes,  
Marcellus.  
Albertus.  
Pliny.  
Strabo.  
Their nature and several parts.

Stumpfius.

Albertus.  
Pliny.  
Pausanias.  
Bellonius.  
Ellebach.

*Columm.* sleep, for which conceit, their blood is prescribed for them that are purblind. The tail of this beast is shorter and lesser then is the fallow-Deer, inasmuch as it is doubtful whether it be a tail or not.

The place of their abode, They keep for the most part in the Mountains among the rocks, being very swift, and when they are pursued by Dogs, (Marital faith) they hang upon the rocks by their horns to deceive the Dogs, after a strange manner ready to fall and kill themselves, and yet have no harm, whither the Dogs dare not approach, as appeareth in this Epigram:

*Pendentem summa capream de rupe videbis,  
Cesuram speres, decipit illa Canes:*

Yet this doth better agree with the wilde Goat then with the Roe, as shall be manifested in due time.

*Ellianus* saith, that the *Cynoprosopi*, men with Dogs faces, live upon the flesh of Roes and Bugles, in the Wildernesses of Egypt: and also it is usual to conclude them in Parks; for they will agree very naturally with Hares and Swine: wherefore in the Lordship which *Varro* bought of *Pislo*, it was seen how at the sound of a Trumpet, both Roes and Boars, would come to their usual places for meat; and although they be naturally very wilde, yet will they quickly grow tame and familiar to the hand of man; for *Blondus* did nourish many at Rome. Being wilde, they are hunted with Dogs, shot with Guns, taken in nets; but this falleth out seldom, because they live most among the rocks.

*Their concord with other beasts.* They are most easily taken in the Woods. When they are chased, they desire to run against the wind, because the coldness of the air refresheth them in their course; and therefore they which hunt them place their Dogs with the wind; for sometimes against the hunters mindes, do what they can to the contrary, the taketh her course that way: but Harts when they hear the barking of Dogs, run with the wind, that the favour of their feet may pass away with them. They are often taken by the counterfeiting of their voyce, which the hunter doth by taking a leaf and hissing upon it.

*Columella.* They are very good meat (as *Philophrastus* affirmeth) and that the *Indians* dress at their feasts whole Lyons and Roes for their guests to eat, and the *Sophists* in their banquet, which is described by *Athenaeus*, had Roes therein: and therefore *Plinius* preferreth it before the fallow-Deer, alleading the agreement that is betwixt it and the body of man, being dressed according to Art.

*Simon Sethi.*  
*Avicenna.*

*Hic opata feret nobis fomenta calore  
Ulaeque, molisq; coquenda fovea.*

*Trallianus.*

And therefore also affirmeth, that it excelleth all wilde beasts whatsoever, being not only fit for nourishment, but for the sick; as for them that have the Colick, or the Falling Evil, or the Tympany: and therefore they are best at a year old, or under. Likewise their broth with Pepper, Lovage, seed of Rue, Parsley, Honey, Mustardseed, and Oyl; and for sauce to the meat, they take Pepper, Rue, Hony melted, and an Onyon: sometime also they see the hanches or hips, and make Pasties of the sides and ribs. It is a beast full of fear, and therefore the flesh thereof although it be very dry, yet will it engender some melancholy; of the fear *Marital* faith thus:

*Tam differt aquila columba non est,  
Ac dorcus rigidus fugax leoni.*

As the Dove from the Eagle, and the Roe from the Lyon, which afterward grew into a Proverb. It hath also some Epithets among Authors, which do confirm their disposition full of fear: as flying, weak, wanton, and such like; yet will they fight one with another so fiercely, that sometime they kill each other.

*Their enemies in nature, Sacrifices of Roes, Paganism, Aelianus.*

They fear also the Woolfs, whereof came the proverb, that first of all the Roes will be joynted to the Woolfs, to expreis an incredible matter. They have also been used for Sacrifice to *Diana*, for the *Sapient* women in *Patras*, did lay upon her great Altar whole Harts, Bores, Roes, and other beasts alive: and the *Capite* did eat the males; but religiously worshipped the females, not daring to eat them, because they believed that *Istir* loved them dearly.

Of these beasts came the Islands *Capree* beyond *Surremum* in *Campania*, where *Tiberius* had a famous Castle, and was ennobled by his presence; but since the decay thereof, it is now celebrated for the multitude of quails that are found therein.

*The medicines arising from a Roe.* The remedies or medicines coming from this beast are these: first, the flesh of them eaten, is good against all pains in the small guts, for it dryeth and stayeth the belly. *Plinius* affirmeth, that the teeth of a Dragon tyed to the sinews of a Hart in a Roes skin, and wore about ones neck, maketh a man to be gracious to his Superiors, and them to be favourable and pitiful to him in all his supplications; and if the white flesh in the brest of the *Hiane*, & seven hairs thereof with the genital of a Hart, be tyed in a piece of Roes skin, and hanged about a Womans neck, it maketh that her womb shall suffer no abortions; but these things are trivial, and not to be believed but at pleasure. I know that the tail of a Dragon tyed to the Nerves of a Hart in a Roes skin, the suet of a Roe with Goose-grease, the marrow of a Hart, and an Onyon, with Rozen, and running Lime, do wonderfully help the falling Evil, (if it be made into a plaister.)

*Sextus* saith, that if one give the brain of a Roe drawn or pressed through a ring to an Infant, it will

will preserve him for ever from the Falling sickness and apparitions. The liver of a Roe sod in salt water, and the eyes of a purblind man held over the fume or reek thereof, are cured of their blindness: and some seeke it in a little cup, and anoint the eyes with the scum or froth coming from it. The same liver being burned to powder, and the dult cast on a man bleeding, stayeth the issue or flux. The gall of this beast mixed with Wine, and the Meal of Lupines the weight of a groat, and Hony, take away the spots of the face: and the same gall mixed with water, helpeth a Sun-burned face, and freckles: The same with Hony Attick, taketh away the dimness from the eyes, and with the juyce of a gourd anointed upon the eye-brows, causeth that where the hair hath been pulled off, that it never shall grow again; and this gall is always the better for the age thereof, and as *Hippocrates* did prescribe, it must be kept in a silver pipe or box.

For the tingling of the ears, take with this gall the Oyl of Roses, with the juyce of an Onyon beaten together, and infused warm into the ears for a present remedy: so also, with the Oyl of Roes only, it helpeth the pain in the teeth, and with the Hony Attick, all swellings or pains in the jaws or chaps, putting thereto Myrrhe, Saffron, and Pepper. The same gall with a little Hogs-bread, and the powder of burnt Allum with Anise-seed, made into a Suppository, procureth looseness, if the party have not the Hemorrhoids.

Also the gall taken with Hony, and the juyce of Eglantine, cureth the exulceration of the virile member by anointing it. The Spleen being drunk, helpeth windiness, and the milt is commended against the Colick and biting of Serpents.

Against the Jaundise they take the dung of a Roe dried and sifted, and drink it in Wine; the same also so drunk cureth the Ague; and because the Roe-buck doth wonderfully love his female, there be some that affirm, that if a woman eat the bladder of a Roe, it will likewise make her husband to love her exceedingly.

Of the first kinde of *TRAGELAPHVS* which may be called a *DEER-GOAT*.



There

Plinius.

Of the generation of this beast.

Athenens.  
The Countreies of this beast, and the name hereof.

Xenophon.

Calus.

Of the parts.  
Of the Countreies of this beast.

Agricola.

Of their strength and colour.

A fecter in their passion.

There is another kinde so like a Deer (although conceived of a Buck-Goat and a female Hart) that I cannot but expels the figure and brief narration thereof (as is in the foregoing page.) It is like a Deer (except the beard and bristles growing about the shoulders) and Pliny affirmeth, that they are found about the river *Phasis*, in *Arabia* and *Arachote*, which is a City of *India* so called of *Arachotus*, a river issuing from *Caucasus* which the *Græcians* call *Tragelaphus*, and the  *Germans*, *Ein Brandchirle*, and some think this beast to be mentioned by the name of *Ako*, in *Deut.* 14. This doubtless is the same beast which *Aristotle* calleth *Hippelaphus*, because he attributeth the self same things to it that *Pliny* ascribeth to this, both for the beard, the bristles, and deep hair about the shoulders, which hangeth down like the mane of a Horse.

The similitude both in proportion and quantity holdeth with a Hart in the feet which are cloven, and that the female thereof doth want horns. The horns of the male are like the horns of a Roe. Therefore howsoever some have imagined that there is no such beast to be found in the world, they are rather to be pitied then confuted, for it is not to be doubted, that neither the Ancients, nor any other, ever have seen all the divers and marvellous shapes of Beasts, which are to be found in many remote and far distant places of the world, especially in *Arabia* and *India*, where are many Deserts; and therefore the reason why they affirm this, is, because they never saw any such, and so it is to be understood: for the rare pictures of these beasts called in ancient time *Canastra*, whereupon children were carried in Pageants and shews, gave them occasion to think, that these were but mens devices, and that God never ordained such creatures. *Georgius Fabricius* which sent me this picture, doth among other things write unto me very probably, that this kinde is only distinguished from other in form, name, and strength, and not in kinde: and this being more strange and less known among men, was called by the *Græcians*, *Tragelaphus*; being greater then the vulgar Deer, deeper haired, and blacker in colour, and this (saith he) is taken in the Ridings or Forreits of *Misena*, bordering upon *Bohemia*, and the common sort of hunters hold opinion, that by reason it loveth to lie where Coals are made, and in their dust, feeding upon such grasse as groweth in those places, that therefore the  *Germans* call it *Brandhirze*, and so the Foxes which resemble them in colour, are called *Brandfuchs*.

It is for certain that these are greater and stronger then Harts, their upper part of the back being black, and the neather neer the belly nor white (as in a Hart) but rather blackish; but about his genitals very black. I have seen the horns to have seven spires or branches, growing out of one of them, being palmed at the top. These are like to those which are called *Acheims* in *Greek*; by reason of their pain and sorrow: and *Kummer* in *German*, because they live in continual sorrow for their young ones, while they are not able to run out of their dens, belike fearing by some instinct of nature, lest their tender and weak age, should betray them to the Hunters, before they be able to run away.

The Figure of another *TRAGELAPHUS*, or *DEER-GOAT*, exprest by *Bellonius*.

The description of his several parts.

There is another *Tragelaphus* (saith he) whereof I finde no name among the *French*: it wanteth a beard, and the hair thereof resembleth an *Iber-Goat*, (whose description followeth afterward among Goats:) the horns hereof are like a Goats, but more crooked and bending, compassing behinde, as a Rams do, which he never loseth. His face, nose, and ears, are like a Sheeps, the skin of his cuds being very thick and hanging down. His legs are white like a Sheeps: his tail white; his hairs are so long about his neck and stomach, that you would think it were bearded. His hair on the shoulders and breast black, and it hath two great spots on its flanks on either side: the nostrils



are

are black, the beak or face white; so also is the belly beneath, but the description hereof seemeth rather to agree with a *Pygargus*, or *Musman*, of which I shall speak afterward.

I do rather approve the relation of another of this kinde, which was sent unto me by that most learned English Physician *John Cuy*, which as he writeth unto me, was brought in the year 1561. out of the Countrey of *Mauritania*, which was cloven-footed, and liveth for the most part in the Mountain parts of that Countrey, being in quantity betwixt a fallow-Deer and a Hart; the body more like a Hart, and the side branded and hanging down: a shorter and thick neck, the colour in the Winter black, and red, set one with another: the beard like a Goat, but more divided and turned backward; his hair very long, even to his knees, a mane full of bristles, stretched out in length through his whole neck, but especially about the top of his shoulder-blades, where it standeth like bunches, being in colour darker then in other parts of the body; and the hinder legs are covered with longer and harder hairs down to the pastern, (as I think) for no other cause but to defend them from harm in his leaping: and the hoof of this beast was more strange (as being cloven, as was said before) the outward hoof in his fore-legs is longer and greater then the inward, and contrary in the hinder: and the inward clove thereof is longer and greater, and the outward smaller and shorter; so as another side you would think one of them was the hoof of a Goat, and the other of a Hart, both of them hollow and without soles; whereof I can give no other reason, then the pleasure of nature, which hath so provided, that whereas this beast liveth among the rocks, and sharp places of the Mountains, his foot-steps are by his hollow hoofs more firm and stable, because by that means, the stones and sharp-pointed rocks cannot enter into them to stay them up from sliding: but it is more strange in the females hoofs, for they have upon the top and upper face of them three or four pisanse impressions, (as it were of fawed or indurified flowers, if a man mark them earnestly) which I think are given unto them only for ornament and delight.

A fecter in the hoof.

Either sex loose every year their hoofs, and Harts do this yearly, that nature may shew their resemblance in their feet to a Hart, as he doth in their head to a Goat. His ears are short like a Goats, but his eyes, genital, stones, and tail, like a Harts, though somewhat shorter. The horns like a Rams, crooked and distinguished in the middle, by a black line all their length; which is two Roman feet and one finger, and in compass at the root, one foot, one palm and a half, standing one from another, where they differ most not above one foot, three palms, one finger and a half. The rugged circles going about them, toward the top are bunchy, and toward the bottom or root they are low, with beaten notches or impressions.

They are not as the top distant one point from another, above one foot and a palm. The length of their face, from the crown to the tip of their nose, one foot and three fingers: the breadth in the forehead, where it is broadest, two palms and one finger.

Their quantity in length and breadth.

The height of this beast is above three foot and a half, except where his mane standeth, and the whole length hereof from the crown of the head to the tail is four feet and a half and two fingers.

It hath only teeth beneath on the neather chapp, and those in number not above six; neither did I observe any defect in them. It cheweth the cud like other cloven-footed beast. The mane is black, from wholen the upper lip is divided by a long perpendicular line. It is a gentle, pleasant and rancorous beast; in the disposition rather resembling a Goat then a Hart, desiring the steepest and slipperiest places whereon it leapeth, and from whence (it is reported) that it doth cast down it self headlong upon the horns naturally, that by them it may break the violence of his fall or leap, and then stayeth his body upon the fore-knees.

Of the description of this beast.

It will run a pace, but it is most excellent in leaping, for by leaping it ascendeth the most highest Mountains and Rocks. The females are greater then the males, but not in horn or hair, it eateth Grasse, Oats, Cheaf, Hay, and Bread, they bring forth twins every time: and this we call in *England* a *Barbary Deer*. Thus far Doctor *Cuy*.

## OF the HART and HINDE.

The male of this beast is called in *Hebrew*, *Aial*, *Deut.* 14, and the *Arabians* do also retain that word in their translations, the *Persians* call him *Gozar*, the *Spaniards*, the *Græcians* at this day *Laphe Pelopha*; and *Saint Jerom* for the *Latines*, *Cervus*; the *Chaldees*, *Ailish*; the *Italians*, *Cervu*; the *Spaniards*, *Cervu*; the *French*, *Cerv*; the  *Germans*, *Hirtz*, or *Hirt*, and *Hilfch*; the *Flemmings*, *Hert*; the *Poles*, *Gelen*; the *Polishians*, *Jelis*, *elii*. The female of *Hinde* likewise termed in *Hebrew*, *Aial*, and sometime *Alla*, and *Aietel*; the *Latines* and *Italians*, *Cerva*; the *Spaniards*, *Clerua*; the  *Germans*, *Hinde*, and *Hindin*; and the  *Germans* more specially, *Hin*, and *Wilprecht*; the *French*, *Riche*; and the *Poles*, *Laniti*. The young Fawns or Calves of this beast they call in *Latin*, *Himulus*; the *Græcians*, *Nebros*; the *Hebrews*, *Ofar*; the  *Germans*, *Hindcalb*.

The names of a Hart.

The names of a Hinde.

The names of a Hinde-calf.

Also it is not to be forgotten, that they have divers other names, to distinguish their years, and Countries, as for example: when they begin to have horns, which appear in the second year of their age like bodkins without branches, which are in *Latin* called *Subula*, they are also called *Subulini*; for the similitude they have with Bodkins: and the  *Germans* call such an one *Spirozirze*, which in *English* is called a *Spirard*; and the *Italians*, *Corbiati*; but the *French* have no proper name for this beast that I can learn, until he be a three yearling, and then they call him (*in Gabri*) which in *Latin* are called and *Subulons*, *Enartii*.

Aristotle.

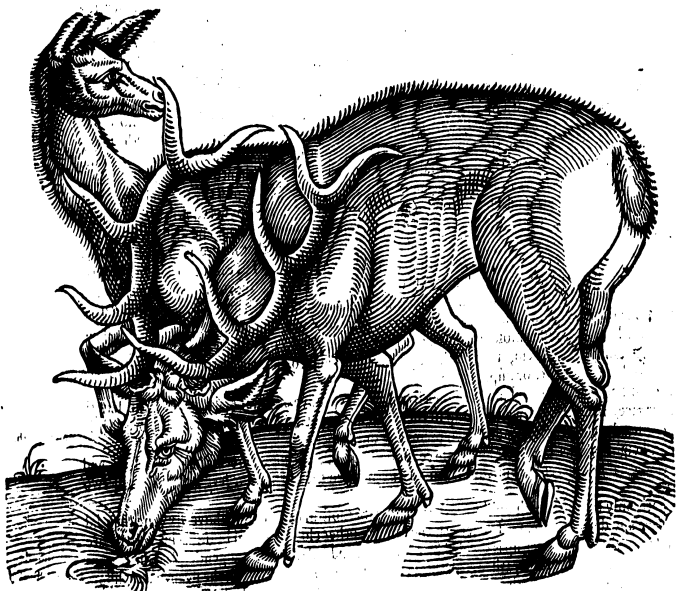
Pliny.

Of Spitzards and Subulons.

And

Of Brocards.

The quantity of Brocards.



Of their horns.

They have but one branch growing out of the stem of their horn, which is not bigger than a man's finger, and for this cause in the rutting time, when they joyn with their females, they easily overcome the vulgar Hart, with his branched and forked horns. The Hunters call this Brocard the shield-bearer to the residue; for by him they are delivered being hunted: for whereas it is the nature of the vulgar Hart, to get into ditches, and hide himself in hollow places when he heareth the Hounds, this Beast never coveteth any secret place to cover himself, but runneth still in the sight of Dogs, who leave the other that hide themselves, because they keep this on foot: and so when the Hunters are passed by the lurking Harts, they return back again, being safe both from Nets and Dogs, while the poor Brocard is chased unto death.

These being old, are also known by their teeth and horns, for they never change them; but it is questionable, whether they have any Hindes or females, although my Author informeth me, that he heareth there be also Hindes with horns like these, being not above one finger long; which if it be true, it is not improbable that these are the females of that kinde: whereunto I yeeld more easily, because the vulgar Hindes will not admit copulation with the Brocard, except they be contrained, and as it were ravished against their will, from whence it cometh that they are so rare and seldom bred: their flesh is much sweeter than the vulgar Harts.

I have therefore here expressed the figure of the head of this Beast with his horns, which is also called *Anamys*, or a *Burgundian Brocard* whose horns are at the longest about eighteen inches long, and at the shortest about nine inches, whereof that part which cleaveth to the head is bunchy and indented; the longest as they grow in length,

The figure of the face and horns.

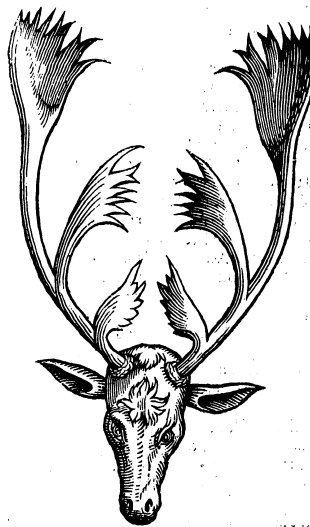


length, do more and more stand out one from another, turning up at the top like a bow, but the lesser do not stand out so far, and bend very little at the point; and whereas in the vulgar Harts the root of the horn is but in a round circle, as it were fastened upon the skull of the Beast, in this the bony roots lie within the skins much deeper, as may be easily discerned by comparing both together.

The reason why I call this *Burgundian Hart*, or *Subulon Anamys*, is, because it not only wanteth the manifold branches of vulgar Harts, but that also which is called *Anamys*.

There are also another sort of Harts called *Achais*, bred in *Creet* near *Achea*, whereas in all other parts of *Creet* there are no Harts, whereof it is affirmed by *Gaza*, that there was one of them which had a bough of green Ivie growing in his horns, it was conjectured that when it was young, some sprig of that Ivie was taken in a fliter of the horn, which by reason of some nourishment it found in the horn natural to that tree, being like a rocky substance, it there grew to more perfection. These are also called *Spathene*, although that term be also given unto vulgar Harts, to signify their full age; yet some are of opinion, that this *Achais* Hart was but an invention or figment made in bread; for there was in ancient time a kinde of loaf called *Achais* in the likeness of a Hart.

The picture of another face and horns.



I received also of that learned man *John Cuy*, another head out of *England*, which he conjectureth to be the head of the palmed Buck, as it was called by *Julius Capitolinus*, which I do not take to differ from the fallow-Deer: and yet because this seemeth to be of the most excellent kinde, I have thought good to express it in this place, being far different from all other horns of this kinde of Beasts, and more beautiful.

Harts are bred in most Countries, but the Ancients do celebrate and prefer those of *Britain* before other, where they are of divers colours both white and black, as *Paulinus* affirmeth. In *Ordo*, a region of *Asia*, toward the Northern Ocean, they ride upon Harts; likewise there are Harts in *Soybia*; and the people call *Medita*, which are subject to the Kings of *Tartaria*, make their Harts so tame, that they also ride upon them: there are none in *Creet*, except in the region of the *Cydonites*. There are also in the Woods of *Helvetia*, but not so many as in time past, because *Demetrius* do not nourish game and pleasures like unto Monarchies, and therefore they are daily killed by the vulgar sort, there being no law against it.

The Harts of *Hellefont*, and about *Argimusa*, have one of their ears slit or cut asunder by nature in their dam's belly; and therefore they never go over the Mountains into other regions: (as indeed it is the property of all Harts to love their native soils above all other places.) There is a City called *Dora*, in *Affria*, near the banks of

*Euphrates*, where are many flocks of Harts, of whom many times some are slain with Darts, and others as they swim away to their accustomed solitudes are oppressed in the water by the weight of Oares, and so taken. They are for the most part sand-coloured, and intermingled with some white spots, especially the Hindes and their Calves, and sometimes milk-white, which happeneth unto them by some defect in their nourishment before they be calved; and for natural imbecillity: so have I seen white Bears, Hares, Quails, Partridges, and Swallows.

When *Apollonius* and his Colleagues travelled by *Paros*, a City of *India*, they suddenly heard a noise like the sound of a pipe; and while they looked about to see what it signified, they perceived that it was the pipe of a Keeper or Forrester, which governed a whole flock of white Harts: such an one was the Hart of *Sertorius* that noble Captain; whereby he led his Army, as they were perwaded by it, who affirmed that it was a Spanish Prophet or Wizard given to him by a certain *Lusitanian*, whom he took in an Island of *Portugal*; saying moreover, that he was inspired by *Diana*, and that he had authority from that Goddess to admonish him, and make the hearts of his Souldiers cleave fast unto him; and therefore if at any time he miscarried in his proceedings, he could easily pacifie them from mutinies, insaying, that his Hart set him upon that enterprize, so putting off the fault cunningly from himself to the Beast for fear of defection; wherefore also these were used in the *Bacchanals* of *Grassovia*, and their flesh being softer, is peculiarly relished by the *French*, *Venation*. These do excell all other in the Beauty of horns, which are very high, yet grow they not to their bones or skulls, but to their skin, branching forth into many speers; being

*Artifice.*  
Of the shape  
of Harts.  
*Gaza.*  
A miracle in  
the horn of  
this beast.  
*Plinius.*

Of the regions  
breeding  
Harts.  
*Salinus.*

*Helianus.*  
*Aristotle.*  
A secret in the  
ears of Harts.  
*Ammianus.*  
A History.

*Pollux.*  
*Varinus.*  
Of the colour.  
*Aristotle.*  
*Buellius.*  
*Polistratus.*  
A History.  
*Plutarch.*  
*Gellius.*

Of their  
horns, and the  
beauty of  
them.



solid throughout, and as hard as stones, and fall off once every year, but if they remain abroad in the air, where some wind and rain fall upon them, so as now they are wet, and anon dry again, they grow as light as any vanishing or softer substance, as I have proved by experience, finding some which have been lost by them in the Woods: wherefore I gather that they are of an earthly matter, concrete and hardened with a strong heat made like unto bones. It must be understood that the males only are horned, and yet have they small benefit by them, because (as I said) they grow but within their skin, and these also they lose every year in the Spring time. At one year old they have nothing but small bunches, as it were signification of their horns to come growing on their head: at two years old they appear more perfectly, but straight and simple; at three years they grow forked into two speers, at four into three, and so increase every year in their branches till they be six, and above that time you cannot certainly discern their age by their head, for their horns or speers grow not more in number, although their years make them greater in quantity: yet the old Harts do want these two branches, which the *Grecians* call *Amyneral*, and the *Latines*, *Admimcula*; because they first come forth: and I have heard there were Harts horns in an Apothecaries shop of *Antwerp*, which had every one fifteen branches upon one item, which if it be true, it goeth beyond all experience. Every year in the month of *April*, they loose their horns, and so having lost them, they hide themselves in the day time, inhabiting the shadowy places, to avoid the annoyance of flies, and feed only during that time in the night. Their new horns come forth like bunches at the first, and afterward by the increase of the Sun's heat, they grow more hard, covered with a rough skin, which the Hunters for honours sake call a Velvet head, and as that skin dryeth, they daily try the strength of their new head upon trees, which not only scrapeth off the roughness, but by the pain they feel in rubbing them, they are taught how long to forbear the company of their fellows; for at last, when in their chafing or fretting of their new horn against the tree, they can no more feel any smart or grief in them, they take it for high time to forsake their solitary dwellings, and return again to their former condition, like one that is supplied with new arms, after the losing of his old. The tender and new horns the *Germani* call *Marchi*, and *Kolben*: these being taken from the Beast, are accounted among great Noble men a delicate dish of meat. *Cyprius* is said to have a Hart with four horns, which was called *Nicotrus*, and by him dedicated to *Apollo*, which I do therefore remember in this place, because it is seldom seen, that an Hart can bear naturally above two horns. Authors do generally affirm, that when a Hart hath lost his horns, he hideth them in some secret places, because he understandeth some secret virtues are contained in them, which mankind seeketh for, and therefore he either envying the good of other, or fearing lest they bewray him hereafter to Hunters, taketh the best care and providence his discretion can afford, that they never come to the handling of men. When the people asked *Apollo*, what they should do with *Proetus* their Tyrant, the Oracle answered, that he should go to that place where Harts cast their horns: whereby it was gathered, that he should be slain and buried in the earth, and this caused the Proverb, *Ubi cervi abijciunt cornua*, to signifie a desperate business: yet could it not be agreed, whether the Hart make more account of his right horn or his left, and therefore *Aristotle* affirmeth, that the left horn is never found; and *Pliny*, that the right horn is never found.

This difference may be reconciled with ease, for right and left are so teamed for three causes, or three manner of ways. First, properly in all creatures, according to the beginning of motion. Secondly, for similitude or likeness, as the right and left side of Images, statues, &c. Thirdly, improperly when the right side of one thing lieth against the left side of another, being opposite, as when two men stand face to face, and by this reason may the left horn of *Aristotle*, and the right horn of *Pliny* signifie all one thing: but we know that the horns of Harts are found yearly both in Fields and Woods.

The wilde Harts of *Sarmatia* near *Turkey*, have the greatest horns of all other, for it hath been proved, that one pair of them have weighed forty pounds *Troy* weight and above: and there they lose their horns in *March*, neither do they fall off together, but first one, and then the other, and after the first falling, it is manifest, that a certain worm getteth on them, and maketh upon them many circles and little furrows, whereby the root or basis being weakened, the horn groweth very white in that place, and yet not without some appearance of blood remaining, which cleaveth to it from the first falling off: for, when the head of this Beast is disarmed, there issueth blood from the skull, and in appearance the naked place is like a wound, and yet it is wonderful to mark, that within three days the same is healed and filled with the blood which congealeth in that place first to a sinew, and afterward to a hard bone, so as in *August* at the farthest, the horns are perfect; and therefore the *Egyptians* to describe a long-lived man, picture a Hart losing his horns every year, and new coming in their place. If any man be desirous to know the reasons, why only Beasts of this kind lose their horns in this manner; I will not spare my pains to set down the best, which Authors have rendered for this wonder of nature.

First, because of the matter whereof they consist, for it is dry and earthy like the substance of green leaves, which fall off yearly, wanting glewing or holding moisture to continue them; and for this cause the horn of a Hart cannot be bent. Secondly, from the place they grow upon, for they are not rooted upon the skull, but only within the skin. Thirdly, from their efficient cause, for they are hardened both with the heat of Summer, and cold of Winter, by means whereof the pores to receive their nourishment liquor, are utterly shut up and stopped, so as of necessity their native heat dryeth which

The time of  
losing their  
horns.  
*Pliny*.

*Ellanus*.  
A history of a  
Hart with  
four horns.

Whether the  
right or left  
horn be most  
prelous.

Of the horns  
of *Turkey*  
Harts.

*Bonatus*.

*Orus*.  
The reasons  
why Harts and  
Deer lose  
their horns  
yearly.

which falleth not out in other Beasts, whose horns are for the most part hollow, and fitted for longer continuance, but these are of lesser, and the new bunches swelling up toward the Spring, do thrust off the old horns, being help either by the boughs of trees, by the weight of the horns, or by the willing exsultion of the beast that beareth them. *D. moritur* and other (as *Citilius* and *Aelianus*) give other reasons, but because they seem to be far fetched, I will omit them. Yet by the way, it is to be noted, that if a Hart be libbed or gelded when he is young, he never beareth horns, or very small ones; and if his horns be upon him at the time of gelding, they never wax less, or greater, or fall off. The Hinde never bear horns at all, as some have affirmed, but I rather believe *Cesar Maximilian*, and *Zenodorus*, who affirm upon their knowledge, that Hinde in some Countries have horns like the males: as likewise it is observed in the Elephants of *India*, and for this cause the Poets expressed the Hinde which nourished *Telephus* with horns, and that which *Hercules* took with golden horns, and it is for certain, that in *Lithopia* and *Lybia*, both sexes have horns.

The face of this beast is fleshy, his nostrils flat, and his neck very long; his ears, some greater, and some smaller; but in the Mount *Elephus* and *Hellefoni*, they are slit. It is observed, that when a Hart pricketh up his ears, he windeeth sharp, very far and sure, and discovereth all treachery against him, but if they hang down and wag, he perceiveth no danger. By their teeth is their age discerned, and they have four on both sides, wherewith they grind their meat, and besides two other much greater in the male than in the female, and they bend downward to bite withall. All these beasts have worms in their heads bred underneath their tongue in a hollow place, where the neck-bone is joyned to the head, which are not bigger then such as flies blow in rotten flesh. They are ingendered together one with another, and they are in number twenty, as some would have it; but I was given to understand by one that saw a head of this Beast diffied, wherein were many more Worms, and not contained in one place, but spread all over the head.

The breatt is by the *French*-men called peculiarly *Hampan*, his blood is not like other Beasts, for it hath no *Fibres* or small veins in it, and therefore it is hardly congealed. His heart is very great, as it is so falleth out in all fearful Beasts, having in it a bone like a Crois, as shall be afterward manifested. His belly is not of one fashion, as it falleth out in all other which chew the cud.

He hath no gall, which is one cause of the length of his life, and therefore also are his bowels so bitter, that the Dogs will not touch them, except they be very fat. The *Achaian* Harts are said to have their gall in their tails; and others say, that Harts have a gall in their ears. The Harts of *Britain*, and *Ibaine*, have their reins quadrupled or four-fold. The genital part is all nervy, the tail small; and the Hinde hath udders betwixt her thighs with four spears like a Cow: Both male and female are wonderfully swift, and subtle, as shall be shewed in the discourse of their hunting. They are also apt and cunning to swim, although in their swimming they see no land, yet do they wind it by their noses. They chew the cud like other Beasts. It is reported, that when a Hart is stung by a Serpent, that by eating *Elaphoglossum*; (that is, as some call it, Harts-eye; other Hart-thorn, or grace of God; others *Wilde Ditany*) it presently cureth the wound, and expelleth the poyson: the same vertue they attribute to *Polyopide*, against the wound of a Dart.

Having thus entred into mention of their food, it is to be farther observed, that the males of this kind will eat Duall or Night-shade, which is also called Deaths herb, and they also love above all other food wilde Elder, so as in the Summer time they keep for the most part in those places where these plants grow, eating the leaves only, and not the boughs or sprigs: but the Hinde will eat neither of both, except when the beareth a male in her belly, and then also by secret instinct of nature, she feedeth like a male. They will also eat Serpents, but whether for hatred to them, or for medicine they receive by them, it is questionable. A Hart by his nose draweth a Serpent out of her hole, and therefore the *Germanians* derived *Elaphor*, a Hart, from *Elauerein tou open*, that is, of driving away Serpents.

I cannot assent to the opinion of *Aelianus*, that affirmeth the Serpents follow the breath of a Hart like some Philtre or amorous cup, for seeing that all Authors hold an hostility in natures betwixt them, it is not probable; that the Serpent loveth the breath of a Beast, unto whose whole body he is an enemy, with a perpetual antipathy. And if any reply, that the warm breath of a Hart, is acceptable to the cold Serpent, and that therefore the followeth it, as a Dog creepeth to the fire, or as other beasts to the beams of the Sun; I will not greatly gain-say it, seeing by that means it is most clear, that the breath doth not by any secret force, or vertue, extract, and draw her out of the den, but rather the concomitant quality of heat, which is not from the secret fire in the bones of the Harts throat, (as *Pliny* hath taught) but rather from her ordinary expiration, inspiration, and respiration. For it cannot be, that seeing all the parts of a Serpent are opposite to a Hart, that there should be any love to that which killeth her.

For my opinion, I think that the manner of the Harts drawing the Serpent out of her Den, is not as *Aelianus* and *Pliny* affirmeth, by sending into the Cave a warm breath, which burneth and scorseth the Beast out of her Den; but rather when the Hart hath found the Serpents nest, he draweth the air by secret and violent attraction out from the Serpent, who to save her life followeth the air out of her den; as when a Vessel is broached or vented, the Wine followeth the flying air; and as a Cupping-glass draweth blood out of a scarified place of the body: so the Serpent is drawn unwillingly to follow her destroyer, and not willingly, as *Aelianus* affirmeth.

Unto this opinion both *Oribasius* in his Commentaries upon the Aphorisms of *Hippocrates*, and *Gambertius* his restorer do joyntly agree: but the Serpent being thus drawn forth, addeth greater

A natural se-  
cret of gelded  
Deer.  
*Aristotle*.  
*Pliny*.  
*Solinus*.

The several  
parts.  
*Aristotle*.

*Aristotle*.

*Aristotle*.  
*Pliny*.

Of their dipo-  
sition.  
*Pliny*.  
A secret to  
cure poyson.

Of their food.  
*Tragus*.

A secret in the  
Hinde.  
How Harts  
draw Serpents  
out of their  
holes, and  
wherefore  
they eat and  
devour them.

A. lianus.

greater force to her poyfon, whereupon the proverbial admonition did arise. *Cave ne incidere in serpentem, cum extraxeris a latrone anbelitu cervi effugeris, tum enim propter iracundiam vehementius ei venenum est*, that is, Beware thou meet not with a Serpent drawn out of her hole by the breath of a Hart, for at that time by reason of her wrath, her poyfon is more vehement. After this self same manner do the Sea-Rams, draw the Sea-Calfs hid in the *Subterranean Rocks*; for by smelling they prevent the Air that should come unto them for refrigeration.

Oppianus.

Of the fight between Harts and Serpents.

There is many times strange conflicts betwixt the Hart and the Serpent, thus drawn forth; for the Serpent seeing her adversary, lifteth her neck above the ground, and gnatheth at the Hart with her teeth, breathing out very bitter hissings: on the contrary, the Hart deriding the vain endeavour of his weak adversary, readier to fight then powerful to harm him, suffereth him to embrace both his neck and legs with his long and thin body, but at an instant teareth it into an hundred pieces. But the most strange combats are betwixt the Harts and Serpents of *Lybia*, where the hatred is deeper; and the Serpents watch the Hart when he lyeth a sleep on the ground, and being a multitude of them, set upon him together, fastening their poysonful teeth in every part of his skin; some on his neck and breast; some on his sides and back, some on his legs, and some hang upon his privy parts, biting him with mortal rage, to overthrow their foe.

The poor Hart being thus oppressed with a multitude, and pricked with venomous pains, assaileth to run away, but all in vain, their cold earthy bodies and winding tails, both over-charge his strength, and hinder his pace: he then in a rage with his teeth, feet, and horns assaileth his enemies, whose pears are already entred into his body, tearing some of them in pieces, and beating other aunder: they never the less (like men) knowing that now they must dye rather then give over, and yeeld to their pitiless enemy, cleave fast, and keep the hold of their teeth upon his body, although their other parts be mortally wounded, and nothing left but their heads, and therefore will dye together with their foe, seeing if they were asunder, no compassion can delay or mitigate their natural unappeasable hatred.

The Hart thus having eased himself by the slaughter of some, (like an Elephant) at the sight of their blood, belurreth himself more busily in the eager battail, and therefore treadeth some under foot in the blood of their fellows, other he persueueth with tooth and horn, untill he see them all destroyed: and whereas the heads hang fast in his skin, for avoiding and pulling them forth, (by a divine natural instinct) he flyeth or runneth to the waters, where he findeth Sea-Crabs, and of them he maketh a medicine, whereby he flaketh off the Serpents heads, cureth their wounds, and avoideth all their poyson; this valiant courage is in Harts against Serpents, whereas they are naturally afraid of Hares and Conies, and will not fight with them.

Erymologus.

Varrus.

Isidorus.

It is no less strange that Harts will eat Serpents, but the reason is, for medicine and cure; for sometimes the pores of his body are dulled and shut up: sometimes the worms of his belly do ascend into the roof of his mouth, while he cheweth his cud, and there cleave fast: for remedy whereof the Hart thus affected, runneth about to seek for Serpents; for his devouring of a Serpent, is a cure of this malady.

Pliny saith, that when the Hart is old, and perceiveth that his strength decayeth, his hair change, and his horns dry above custom, that then for the renewing of his strength, he first devoureth a Serpent, and afterward runneth to some Fountain of water and there drinketh, which causeth an alteration in the whole body; both changing the hair and horn: and the Writer of the *Gloss* upon the 42. Psalm, which beginneth, *Like as the Hart desireth the water springs, so longeth my soul after God*; confirmeth this opinion.

Vincennius Belluacensis affirmeth, that Harts eat Serpents for to cure the dimmels of their eye-sight. But for the ending of this question, we must consider that there are two kinds of Harts; one which by the drawing forth of a Serpent out of her hole, doth presently kill her by stamping her under feet, this eateth that Serpent, and runneth to springing water, after that he feeleth the poyson to make his body swell, and then by drinking doth vomit forth the poyson, and in the mean time loseth both hair and horn; yet the Monks of *Mesana* affirm, that the Harts thus poysoned doth only cover her body in the cold water, and not drink thereof, for that were exitial unto her; but she sendeth forth certain tears, which are turned into a stone, (called *Rezarab*) of which shall be more said hereafter. The other kinde of Harts, when he findeth a Serpent, killeth it, and doth not eat it, and immediately after the victory returneth to feed in the Mountains.

Harts are opposed by Wolves, for many Wolves together doth overcome a Hart; and therefore it is but a fable of *Strabo*, that the Wolves and Harts live tame together in the Woods of the *Veneti*. These kinde of Wolves are called *Thors*, and they especially fear these Wolves when they have lost their horns, and feedeth only in the night season, which caused *Ovid* to write thus;

*Vixit iugit nympha, veluti perterrita fulvum  
Cervus lupum, &c.*

Albertus.

They are afraid also of the first and second kinde of Eagles, for with their wings they raise much dust about the Harts, and then they being half blinde, the Eagles pull out their eyes, or else so beat their feathers about their faces, that they hinder their sight, and cause them to fall down headlong from the Mountains: they fear also the ganning of Foxes, and the Lynxes do likewise ly-

in wait to hurt them. These are above all other four-footed Beasts both ingenuous and fearful, who although they have large horns, yet their defence against other four-footed Beasts is to run away. For this cause, in ancient time a fugitive Boy or Servant was called a Hart; and if he ran away twice, *Cantharion*, which *Cantharion* was a *Spartan* fugitive, that first ran to the enemy, and afterward from them came back again to *Sparta*. And *Marialis* thus describeth *Alicus*, who being overcome by *Philip King of Macedon* ran away like a Hart.

*Trux spiritus ille Philippi,  
Cervum cursu precepto lapsus ab it.*

The Epithets expressing the qualities of this Beast are many: as nimble, or agile, winged, or swift-paced, full of years, quick-footed, horned, wandering, fearful, flying, fugitive, light, wood-hunter, wilde and lively. There are of them very audacious, for they will set upon men as they travel through the Woods: and it is observed, that the wrathful Hart hath few bunches on his horn, neither is it so long as others, but bunched at the root; yet all of them being pressed with Dogs or other wilde Beasts, will fly unto a man for succour.

It is reported by *Philip Melancthon*, that in *Locha* (a town of *Saxony*) there was a Hart, which before rutting time would every year leap over the walls, and run over Rocks and Mountains, and yet return home again, untill the time that Duke *Frederick* dyed, and then the Hart went forth, but never returned again. The male when he feeleth himself fat, liveth solitary and secret; because he knoweth the weight of his body will easily betray him to the Hunters, if he be hunted and pursued. The female commonly calveth near the high ways, of purpose, to avoid noisome Beasts to her young one, who do more avoid the sight of man than her self. Also it is reported, that *Mithredates* had a Bull, a Horle, and a Hart, for his guard, beside men, who would not be bribed to suffer Traitors to kill him, being a sleep. Moreover it is said of *Pholomus Philadelphus*, that having a Hinde-Calf given unto him, he brought it so familiarly tame, and accustomed it to words, that at length it seemed to understand the *Greek* language: And *Elimus* affirmeth as much of the Harts of *India*, for that language.

When they are wounded with a Dart, and having gotten it out of their body by eating Dittany, they most carefully avoid the Sun-beams, lest they shine upon the green wound, for then it will hardly be cured: but above all other arguments of their understanding, none is more firm and evident, then their swimming; for the Harts of *Amamu*, *Libanus*, and *Carmeli*, (Mountains of *Siria*) when they are to swim over the Sea, to the fruitful green trees of *Cyprus*, they come down to the Sea-shore, and there they tarry till they perceive a prosperous wind, and a calm water; which happening, the Captain or leader of them doth first of all enter into the water, and so the next followeth, laying his head upon the Captains buttocks, and so consequently all the residue resting their head upon the precedent. In the hindmost are the youngest and weakest, that so the violence of the floods being broken by the stronger which go before, the more infirm which follow may pass with less difficulty. Thus sail they along without star or compass to direct them, except their own sense of smelling, using their legs for Oars, and their broad horns for sails. And if the foremost be weary, then slippeth he back to rest his head upon the hindmost, and so likewise the second and third, as they feel themselves enfeebled, untill they arrive at the happy port of good pasture; where growing stronger, like Beasts, fall to fighting for rule and government, but when the combat doth shew the victor and strongest, the residue do ever after yeeld obedience to him. In like sort do the Harts of *Epirus* swim to *Coreja*, and of *Cilicia* to the Island of *Curia*, &c.

They are deceived with musick, for they so love that harmony, that they forbear their food to follow it. Also it is amazed at any strange fight, for if a Hunter come behind a Horle or Bullock, laying over his back his Bow and Arrows, they stand staring upon the new formed Beast, untill the Dart do end their lives.

At the time of their lust or rutting, they are above measure fierce, fighting naturally for the female, and sometimes wounding one another to death; and this falleth out most commonly in the latter end of *August*, at which time *Arthur* riseth with the Sun, and then it is most natural for the Hinds to conceive. In some places in *October* their lust ariseth, and also in *May*; and then whereas at other times the males live a part from the females, they go about like lascivious whoers, seeking the company of their females, as it were at the Market of *Venus*.

The males in their raging desired lust, have a peculiar voyce, which the French call by a feigned word *Reere*; and the Germans, *Brulen*; and the Latines term *Rancere*; and the Beasts so affected *Obligues*. When they finde the females, they are received with fear, then in short space one male will cover many females, continuing in this carnal appetite a month or two: their females do seldom admit copulation, being herein like unto Cows, by reason of the rigour of the males genital: and therefore they sink down on their Buttocks when they feel the genital seed, as it hath been often observed in tame Harts, and if they can, the females run away, the males striving to hold them back within their fore-feet: but surely herein they differ from all other: it cannot well be said that they are covered standing, lying, or going, (but rather running) for so are they filled with greatest celerity.

*Aristotle.*  
Of the fear of Harts.  
*Crinurus.*  
*Nebriolus.*

The Epithets of a Hart.  
A kinde of audacious Harts.  
*Schneberg.*  
Pliny.

The subtilty of a Hart, and their instruction on life.

Aristotle.

*Isidorus.*  
The several kinds of Harts.

A secret against poyson.  
*Salmus.*  
*Elasmus.*

Of the swimming of Harts.  
*Tzetzes.*  
*Gellius.*  
*Oppianus.*

*Salmus.*  
Their love of musick.

Their rage in rutting time.  
*Salmus.*  
*Oppianus.*

Bndus.

Their copulation.  
*Aristotle.*



Likewise the fat and marrow, mollifieth or dispereth all bunches in the flesh and old swellings; all Ulcers except in the shins and legs, and with Venus-navil, the Fistula, mattery Ulcers in the ears; with Rozen, Pitch, Goose-grease, and Goat-sewer, the cleaving of the lips: and with Calves sewer the heat and pain in the mouth and jawes. It hath also vertue being drunk in warm water, to aswage the pain in the bowels and small guts, or Bloody flux.

Sextus.

The gall of a Bull, Oil of bayes, Butter, and this marrow, by anointing, cureth pain in the knees and loins and other evils in the seat of man, in the hips, and in the belly when it is colvive: It procureth flowers of Women, cureth the Gowt, Pimples in ones face, and Ringwormes. *Abstrus* procureth it to be given in sweet wine with wax, unto a Horse for an old Cough proceeding of cold, after purging and heating, by holding the Horses tongue in ones hand while the medicine is thrust down his throat.

Marcellus.

The same in Sheeps milk with Rubrick and soft Pitch, drunk every day or eaten to your meat, helpeth the Pitsick and Obstructions. *Anatolius* approved Bean meal sifted and sod with Harts marrow to be given to a Horse which stalleth blood for three daies together. Also mingled with the powder of Oyster shells, it cureth Kibes and Chiblanes. A woman perfumed with the hairs of this beast, is preserved from abortements; and the same perfume helpeth the difficulty of urine, and little pieces cut off from the hide with a Pumme put in wine, and rubbing the body, helpeth the holy-fire. The powder of the bones burned, is an antidote against the falling evill, and the dispersing of the milt; and the bones beaten to powder, stayeth the Flux of the belly.

It were endless to describe all the virtues ascribed to the horn, and therefore I will content my self with the recital of few. *Pliny* and *Salinus* prefer the right horn, *Aristotle* the left, and the spires or tops are more medicinable then the hard and solide stem, but the horns found in the Woods lost by the beasts and grown light, are good for nothing. The other have their uses both raw and burned, which may be these which follow.

Take the horn and cut it into small pieces, then put it into an earthen pot anointed within with durt, and so set it in a furnace untill it become white, then wash it like a mineral and it will help the runnings and ulcers in the eyes; and the same also keepeth the teeth white, and the gums sound. The young horns while they be soft being eaten, are an antidote against Henbane and other poisonous herbs. The right horn hid by the Hart in the earth is good against the poison of Toads. The Harts horn hath power to dry up all humors, and therefore it is used in eye salves: and *Orphus* promisseth to a bald man hair on his head again, if he anoint it with oil and powder of this horn: likewise the same with the seed of black mirtle, Butter and Oil, restraineth the falling away of the hair being anointed upon the head after it is newly shaven: with Vinegar it killeth Ringwormes. The same burned in the Sun, and afterward the face being rubbed and washed therewith thrice together, taketh away pimple-spots out of the face: the powder drunk in wine or anointed on the forehead, killeth lice and nits; the same with Vinegar, Wine, or Oil of Roses, anointed upon the forehead, easeth the head-ach if it proceed of cold.

Pliny.

Sextus.

Marcellus.

Sextus.

Marcellus.

Galenus.

A perfume made of this horn with *Cassureum*, and Lime or Brimstone, causeth a dead child to strangle in his mothers womb to come forth; if the horn be taken raw and rubbed upon the gums, keepeth the cheeks from all annoyance of the tooth-ach, and fasteneth the loose teeth, as *Serenus* said:

*Quod vero assumpsit nomen de dente friscando  
Cervino est cornu cinis est.*

*Galen* prescribeth the powder of this horn for the Jaundise, and for him that spitteth bloody matter, and to stay vomit being taken in a reere Egge. It comforteth also a rheumatick stomach, and it is tried to cure the Kings evill, it pacifieth the milt, dryeth the Spleen, driveth all kind of Wormes out of the belly, being drunk with hony, and easeth the Colick, expelleth away mothers, helpeth the Strangury, and the pain in the bladder, stayeth Fluxes in women both white and red: being mingled with Barly meal, water, and twigs of Cedar, beside many other such properties.

The tears of this beast after the hath been hunted with a Serpent, are turned into a stone (called *Balsabard*, or *Bexabar*) of which we have spoken before: and being thus transubstantiated do cure all manner of venom (as *Avenazar*, and *Cardinal Ponzasti* affirme) after many trials, and *Serenus* also expresseth in this Distichon:

*Seminis cervi lacrymam miscere liquori  
Convenit, atque artus illino misce calentes.*

The liver of this beast helpeth all sores in the feet, being worn in the shooes, the same dried to powder with the throat or wind-pipe of the beast, and mingled with Hony, and so eaten helpeth the Cough, Pitsick, sighing and short breathing. *Pliny* and *Sextus* affirme, that when a Hinde perceiveth herself to be with young, she devoureth or eateth up a certain stone, which is afterward found either in her excrements or ventricule, and is profitable for all Women with child and in travell, for by that only fact, the Hinde is most speedily delivered without great pain, and seldom or never suffering abortment; and there is also a little bone found in the heart of every one of these

these beasts, which performeth the same qualities, in stead whereof they have such a thing to sell at *Actius*. *Venite*, holding it at great price: but *Brasvola* affirmeth, that he opened the hearts of two Harts, and found in them a little gristle not much unlike to a croffe, whereof the one being of a Beatt new killed, was very soft, but the other was much harder, because the beast was slain about six daies before.

This bone is in the left side of the heart, upon which the Spleen moveth and sendeth forth her excrements by vapors, which by reason of their densels are there turned into a bone, and being first of all of the substance of the Harts blood: and it is good against the trembling of the heart, and the Hemorrhoids, but this bone cannot be found in any, except he be killed betwixt the middle of *August* and the twelfth of *September*.

The skinny seed of the Hind-Calf, is above all other commended against poison, and the bitings of Serpents and of mad-Dogs; likewise it stayeth all Fluxes of blood, and spitting of blood, and egestion of blood: and it being eaten with Beets and Lentils, is profitable against the pain of the belly. The genital part and stones are wholesome (being taken in wine) against all bitings of Vipers, Adders, and Snakes, and the same virtue hath the natural seed supped up in a reere Egge.

Platerius.

The genital hath also a vertue to encrease lust in every creature, it being either dried and drunk; or else bound fast to their privie parts. Likewise being warmed in water, and afterward dryed to powder and so drunk, helpeth the Colick, and the difficulty of making water, if you put it into a little Triacle.

The dung of Harts cureth the Dropisie, especially of a Subulon or young Hart: the urine easeth the pain in the Spleen, the wind in the ventricles and bowels, and infused into the ears, healeth their ulcers. In the tip of the tail lyeth poison, which being drunk, causeth extasie and death, if it be not help by a vomit made of Butter, Annise, and oil of *Sesamine*, or as *Cardinal Ponzastus* saith, that the Harts eye is an Antidote to this evill: It may be known by a yellowish-green colour, and therefore it is called the gall, for nature hath appointed that place to receive all the venom of the whole Body.

I should here end the discourse of this beast, after the method already observed in the precedents: but seeing the manner of the taking hereof (being a sport for Princes) hath yet been touched but very little, it shall not be tedious unto me, to obtain from the necessary relation of the subsequent stories, for the delightful narration of the hunting of the Hart: to the end that as the former treatise hath but taught how to know a Bird in a bush, that which insueth may declare the several ways of catching and bringing the same to hand.

Of the hunting and taking of these beasts.

This is a beast standing amazed at every strange sight, even at the hunters bow and arrow, coming behind a stalking Horse (as is already declared): and moreover, like as the Roes are deceived by the hissing of a leaf in the mouth of the hunter, so also is this beast, for while the hearkeneth to a strange noise, imitating the cry of a Hind-Calf, and proceeding from one man, the receiveth a deadly stroke by the other: so also if they hear any musick pipings, they stand still to their own destruction: for which cause the *Egyptians* decipher a man overthrown by flattery, by painting a Hart taken by musick: and *Varrus* relateth upon his own knowledge, that when he supped in his Lordship bought of *M. Piso*, the Pastour or Forrester after supper, took but a Harp in his hand, and at the sound hereof, an innumerable flock of Harts, Boars, and other four-footed beasts came about their Cabanet, being drawn thither only by the musick; in so much as he thought he had been in the *Roman Circus* or Theater, beholding the playing spectacles of all the *African* beasts, when the *Edilium* Officers have their huntings: the like is also reported by *Strabo*, saying that he addeth, that no toil or engine is so assured or unavoidable to draw these beasts within a labyrinth as is musick, whereby the Hunter getteth as it were the Hart by the ear, for if through attention he hold down his ears as he doth in musick, he distrusteth no harm, but if once he prick up his ears as he commonly doth, being chased by men and dogs, an infinite labour will not be sufficient to overtake and compass him. It is reported that they are much terrified with the sight of red feathers, which thing is affirmed by *Ausonius* in these Verses:

Horus.  
An heroglyphical emblem.

*An cum fratre vagos dumtaxat per avia cervos  
Circundas maculis, & multa indagine penne.*

And *Ovid* also saying,

*Nec formidatis cervos includite pennis.*

And *Lucan* also;

*Sic dum pavidos formidine cervos  
Claudet odorata metuentes aera penne.*

Of which thing the Hunters make an advantage, for when they have found the beast, they set their nets where they imagine the beast will lie, and then one of them sneweth to the beast on the other side, the red feathers hanging on a rope, which scaareth them in haste into the Hunters nets, *Ximphon*.

as S. Jerom testifieth in one of his Dialogues, saying, *Ex pavidorum more cervorum, dum vanos penmarum evitatu volatus, fortissimis retibus implicamini.* And you, faith he, (speaking to the Luesiferian hereticks) run away from the vain shaking of feathers, like the fearful Harts, while in the mean time you are incleaped in unavoidable and inextricable nets. And this caused Seneca to write, that the babe seareth a shadow, and wilde beasts a red feather.

Many times the young Calf is the cause of the taking of his Dam: for the Hunter early in the morning before day light, watcheth the Hinde where she layeth her young one, untill the go and refresh her self with pasture; when he hath seen this, then doth he let loose his Dogs, and maketh to the place where the Hind-Calf was left by his mother.

The silly Calf lyeth immovable as if he were fastened to the earth, and so never stirring, but bleating and braying suffereth himself to be taken, except there be rainy weather, for the impatience of cold and wet will cause him to shift for himself: which if it fall out, the Dogs are at hand to overtake him, and so being taken is committed to the keeper of the nets.

The Hinde both hearing and seeing the thraldom of her poor son, cometh to relieve him, with out dread of Hound or Hunter, but all in vain, for with his dart he also possesseth himself of her; but if the Calf be greater, and so be able to run with the Dam among the herds, they are most hard to be taken, for in that age they run very fast, and the fear of Dogs increaseth their agility, in so much as to take them among the herds is impossible, every one fighting for them.

But the only way is to single one out of them from the flock, and so follow him until he be weary, for although he be very nimble, yet by reason of his tender age, his limbs are not able to continue long. The elder Harts are taken in snares and gins laid in ditches and covered with leaves, whereby the feet of this beast is snared in wood; this kind is described by Xenophon and Pollux, and is called in Greek, *Polestrabz*; in Latin, *Pedica*, of which also the Poets make mention, as *Virgil*:

*Tunc gruibz pedicas & retia ponere cervis.*

And this kind is better described by *Gratius*, with whose words I will passe it over as a thing out of use.

*Nam suis & laqueis aliquis curcibus usus.  
Cervino sifere magis contere nervo;  
Quidque dematas illigen robore clausit:  
Sape habet imprudens alieni lucra laboris,  
Frams tegit insidias habitu mentita festino  
Venator pedas, cum dissimulantibus armis.*

Their manner is when they are chased with Dogs to run away with speed, yet oftentimes stand still and look back, not only to hearken to the hunter, but also to rest themselves, for in their chase they are ever troubled in their belly (as is before declared) and sometime they grow so weary, that they stand still, and are pierced with arrows, sometime they run till they fall down dead, sometime they take themselves to the water and so are refreshed, or else to avoid the teeth of Dogs, they forsake the dry land, and perish in the floods, or else by that means escape scotfree: wherefore it must be regarded by every good hunter to keep him from the waters, either among the woods or other rough places.

But herein the subtilty of this beast appeareth, that when he is hunted, he runneth for the most part to the high ways, that so the favour of his steps may be put out by the treadings of men, and avoid the prosecution of the Hound. Their swiftnesse is so great, that in the *Champaigne* he avoid the prosecution of the Hound, for which cause in *France* they poison Arrows with and plain fields they regard not Dogs, for which cause in *France* they poison Arrows with an herb called *Zenicum* or *Toca*, and it is a kinde of *Aconite* or Wolfe-bane, which hath power to corrupt and destroy agility of body, and to stay celerity, and for their hunting in *France* by Dogs, it is most excellently described by *Budaeus* and *Robertus Stephanus* in his *French Dictionary*.

This wilde, deceitful and subtil beast, (say they) by windings and turnings do often deceive their hunter, as the Harts of *Meandri* flying from the terrible cry of *Diana's* hounds, wherefore the prudent hunter must frame his Dogs, as *Pythagoras* did his Scholars, (*Lauers qui ne parlent point*) with words of Art, to fet them on, and take them off again at his pleasure; wherefore he must first of all compass in the beast, (*En son giste*) in her own lodging, and so raise her up in the sight of the Dogs, that so they may never lose her footing.

Neither must they set upon every one, either of the herd, or that wandereth solitary alone, nor yet a little one, but partly by aspect or sight, and partly by their footings in the soft earth, and also by their dung (*Les fumes*) they judge of their game, for a good Woodman must not stick to gather up the Deers excrement or soil, and keep them (*La trompe*) in his hunting horn: such things must the Kings huntmen and forresters observe, as also the quantity of his bed or lodging when they finde it; being thus informed of their game, then (*Dyspoptes chiens*) they take off their Dog couplings, and some on horseback, other on foot follow the cry with greatest art, observa-

tion, and speed, remembreing and preventing (*Cer frux*) the subtil turnings, and headings of the Hart, straining with all dexterity to leap hedge, pale, ditch, and rocks; neither fearing thornes, woods, down-hills, but providing a fresh horse in case the first tire, (*Chevauz de relatu*) and leaping on him with speed, untill he see (*un grand cri*) the great Hart having ten speers on his horns, and his little squire-hart to attend him, which the Dogs once perceiving, only follow the great Hart, taking for a prohibition to follow any other.

The Dogs are animated by the winding of horns, and voices of the hunters, like Souldiers to a batell by the voice of a trumpet and other instruments: but sometimes the crafty great beast fendeth forth his little squire to be sacrificed to the Dogs and Hunters in stead of himself, lying close in the mean time, then must the retreat be founded, and (*Romppe lechien*) the Dogs be broken off and taken in (*Le timier*) that is, leame again untill they be brought to the fairer game, who ariseth in fear and rage, betaking himself to his surest legs, being perurbed with all the cries of Hunters, ringing and echoing betwixt heaven and earth, dismayning him with the continual noise in his eares, no lesse dreadful and fearful then the voice of a passing bell to a sick man, or the sight of the executioner to a condemned caitife, yet still he striveth untill wearied and breathless, he be forced to offer up his blood and flesh to the rage of all the observant pedissequants of the hunting Goddess *Diana*.

The vulgar sort call an old Hart a subtil and cunning beast, but the Nobles call him (*cerv sage*) a wise Hart, who to avoid all his enemies runneth into the greatest herds, and so bringeth a cloud of error upon the Dogs, to keep them from any further prosecution: sometime also bearing of some of the herd into his own footsteps, that so he may more easily escape and procure a labyrinth to the Dogs, and then after a little while he betaketh himself to his heels again, running still with the wind, not only for refrigeration, but because he may the more easily hear the voice of his pursuers, whether they be far or near.

At last, being (for all this) found out again by the observance of the hunters, and skill of the Dogs, he flyeth into the herds of Cattel, as Kie, Oxen, or Sheep, leaping upon an Ox, and laying his body or the fore-part thereof upon him, as a rider upon a Horse, that so touching the earth only with his hinder hoofs, to leave a very small or no sent at all behind for the Hounds to discern.

The chief huntman or 'sergeant of the hounds unto *Lewy* the twelfth, called (*Le grand venieur*) affirmeth that on a time they having a Hart in chase, suddenly the Hounds fell at a fault, so as the beast was out of sight, and not a Dog would once stir his foot; whereat all the Hunters were amazed, like as in some juggling *Apollonian* trick, as though the hart had clean forsaken the earth, and with the wings of some fowl had been flown away; or as if the earth had opened her mouth to receive him into her protection, and had closed again over her head, or else some Witchcraft had cast a mist before the Dogs and Hunters eyes: At last by calling about (as it is usual in such cases) they found the fraud of the horned beast, which is worth the memory.

There was a great white-thorne which grew in a shadowie steep place as high as a tree, and was invironed with other small shrubs about it, into the which the said Hart leapt, and there stood aloft the boughs spreading from one another, and there remained, whether because he could not get off again, or else for that he was stifled in that place, but surely he was there thrust through and so died, and so had they all rather perish any other way then by the teeth and tearing in pieces of angry and greedy Hounds.

Yet their manner is, that when they see themselves every where intercepted, to make force at him with their horns that cometh first unto him, except he be prevented by some sword or spear; which being done, the Hunter with his horn soundeth the fall of the beast, and then every one approacheth, luring with triumph for such a conquest, of whom the skillfullest openeth the beast, giving unto the Hounds such parts as belongeth to them, for their encouragement against another time; and for that purpose the Hunters dip bread in the skin and blood of the beast, to give unto the Hounds their full satisfaction: and many such other things may the reader desirous of this knowledge find in the Authors aforesaid, to whom I will commend him rather, then spend more time in this business, better manifested by experience, then by any written document, yet I would with men to be sparing in this exercise, seeing it hath been seldom found that a man given to hunting, but he perished in his pleasure, as *Alcan* did by his own Dogs: and therefore *Alcan* doth fitly compare together hunters and receivers of Theeves and Robbers, calling them new *Alcans*; who after they had received horns, must be destroyed by their own Dogs which they have nourished. The best use of these beasts is to keep them tame, as in *Helvetia*, where they hunt seldom, and to make good use of them for nourishment rather then for sport, as it is reported of a holy-man, who kept a Hinde so familiar with him, that in the Wildernes he lived upon her milk.

Concluding this discourse with the words of the Poet, for the instruction of Dogs to this pastime and practise of the beasts.

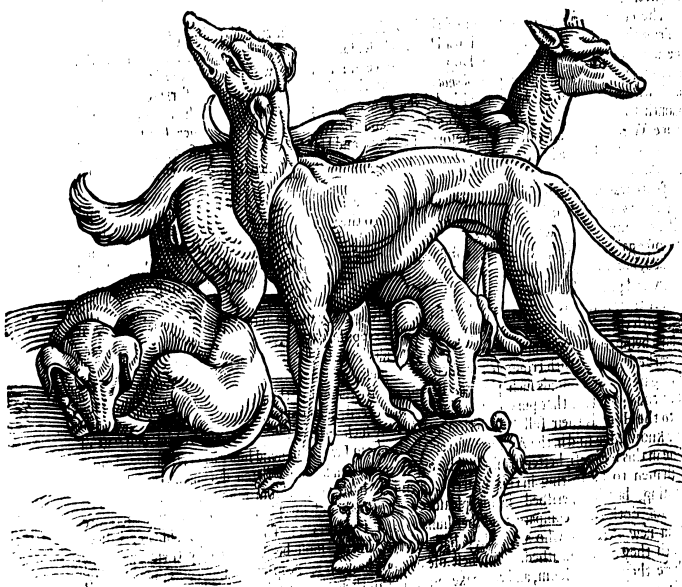
*Velites Sparta catulos, acervumq; molossam,  
Falso fero pingui, etc.*

And again;

Montique per alios  
Ingentem clamore premer ad retia curvum:  
Conferoque agmine cervi:  
Torpent mole nova, & summis vix cornibus extant.  
His non immittit canibus, non ossibus ullis:  
Puniceave agitent pavidos formidine pennæ:  
Sed frustra oppositum trudentes pectore montem  
Gomminis obruant ferro, graviterque rudentes  
Cadunt, & magno læti clamore reportant.

Of the *DICTYES*.

**H**erodotus in his fourth book affirmeth, that among the African Shepherds toward the East, there are bred in *Bassaria* Hyrjiches wilde Rams, *Tboes* and *Dystyes*, of which last there is not any mention among all other writers, except in *Varinus* and *Helyebius*, who affirm that among the *Lacedæmonians* a Glead or Kite was called *Dystis*, but this spoken of *Herodotus* I conjecture to be some four-footed beast, being led with no other reason then that the other with whom he placeth it, are generally known to be creatures of that kind and nature: wherefore I thought good to exhibit, are generally known to be creatures of that kind and nature: wherefore I thought good to press the name of it in this place, desiring the Reader to accept so much thereof as is already known, and to search farther for the description of it, at the hands of them who are eye-witnesses of the wonders of *Africa*.

Of the *DOG* in general.

The name and derivation thereof.

**A** Dog is called in Hebrew, *Keleb*, and *Lemas* according to *Manster*; in *Chalde*, *Kalba*; in *Arabick*, *Kalbe*; in *Persia*, *Say*; the *Sacæans*, *Kep*; or *Kalpe*; the *Greeks* *Kuin* because of his love to man, and vulgarly at this day *Skilos* and *Skile*; the *Medians*, *Spes*; the *Germans*, *Hund*; the *Italians*, *Cane*; the *French*, *Chien*; the *Spaniards*, *Perra* or *Cavendo*, because his barking is as loud as an Artificial song, also *Catulus* from *Hyrcani*, *Perra* or *Pas*; and the *Latin*, *Canis*.

There

There is no region or Countrey in the world, where these are not bred in some store, as The countries shall be declared afterward in the particular discourse of every kind of Dogs. For as shall be manifested more at large, there are Dogs very great, some for hunting, some for War and defence, some for the Boar, Bull, or Bear, some for the Hare, Cony, or Hedge-hog: again some are smaller which are called Hounds, Braches, Beagles, Shepherds Dogs, House-curs, Spagels both for the Water and Land; and some foisting Dogs for the pleasure of the rich.

In the first place there are to be handled the nature of Dogs in general, wherein they agree, and their common properties of nature, such as are not destroyed in the distinction of kinds, but remain like infallible and invariable truths in every kind and Countrey of the world. To begin with that which is outward, it is to be observed that Dogs are generally rough, and their hair indifferently long (which in Winter they lose every year) is a signe of a good constitution; but if it grow over long, the mange scab will follow: the outward proportion of the head altereth as the kind altereth, being sometime like a Lion, sometime like a Hedge-hog, some long with a broad snout, and sometime with a piked snout, but the brain decreaseth and increaseth with the Moon, there is no commissure or seam in his skull (like as in a Mans) but it is a continued bone without separation inward or outward.

The best Dogs have flat nostrils, yet round, solid and blunt, the mouth is long and slit, their teeth like saws, as it is in Fishes and Serpents: those which are called *Canine* before, are only changed, as it also falleth out in a Lion, and these they lose or change, both males and females, in the fourth month of their age: about which time they have new ones come forth to thrust off their old. By their teeth is their age discerned, for while they are white and sharpe, it assureth the youth of a Dog, but when they grow blackish, or duskie, they betoken the elder age.

The breast of a Dog is narrow and piked, his ventricle small and narrow, for which cause he never casteth his bodily excrements without pain, his bowels are like a Lions: he hath a long spleen like a Man, and a Hog: his yard and stones hang outward between his hinder-legs; a base natured cur striketh his tail betwixt his legs; his forelegs bend like the armes of a man, and he useth them in stead of Armes, having five distinct fingers, commonly called claws upon each foot before, and four upon each foot behind, which also have straight nails upon them, and that which hangeth higher upon the leg is crooked.

The females, because they bring forth many whelps at a time, have underneath their bellies great paps, with many spens to suck at, in a double rank or row on both sides, and the generous Butches have 12. other but 10. They bear their young within their belly next to the midriffe; their skin is dry like a Wolves, and thereby his temperament is known to be hot and dry, considered in it self, but compared with others it varyeth, for to a Mans it is dry; to an Emmets, it is moist: again, in respect of a Man, it is hot; in respect of a Lion, it is cold.

The lower and shriller voice of a Dog, is called barking, the lower and stiller, is called whining, or fawning. It was a monstrous thing, that a Dog should speak, and a Serpent bark, as it is believed in antiquity both came to passe, when *Targuism* was driven out of his kingdom. It is not causeless that the barking of Dogs, hath attributed unto it divers qualities, as for a man to dream of the fame, prelageth some treasonable harm by enemies, so likewise if they fawn and claw upon a man.

Among the precedent tokens of *Cæsar*'s death, they set down in certain Verses, the howling voices of Owls, the weeping drops of the Ivie tree, and the continual barkings of Dogs, as followeth.

*Tristia mille locis Stygius dedit omina bubo,  
Mille locis lacrymans ebui  
Inque foro circumque domos & templa deorum  
Nocturnus ululasse canes, &c.*

The Egyptians signifie these things by a Dog, a Scribe, a Prophet, a Spleen, smelling, laughing, and mezing. A Scribe, because as the Dog is silent more then he barketh, so must a perfect Scribe meditate more then he speaketh: for to bark at every one were to pleasure none, and to speak continually, were a signe of madness. Again, a Prophet, because a Dog doth most eagerly behold, and admire constantly at holy actions, and so ought the eyes and ears of a Prophet be attendant upon heavenly things. The Spleen, because a Dog hath little or no spleen, and thereof cometh his madness and death; whereof also it cometh that the servants which have the charge of Dogs, being with them in their sickness and latter end, for the most part prove Splenetick. Smelling, Neezing, and Laughing, because the Splenetick can do none of all these; but of this more afterward.

The voice of a Dog, is by the learned interpreted a railing and angry speech; whereof cometh *Canina scanda* among Authors, for railing eloquence. It is the nature of a Dog when he maketh water, to hold up his leg, if he be above six moneths old, or have been at procreation; the females wine, do it for the most part sitting, yet some of the generous spirits do also hold up the legs. They Arisolle, ever smell to the hinder parts of one another, peradventure thereby they discern their kind and disposition of each other in their own natures. After they have run a course, they Arisolle.

I.

relieve





Pliny.  
Circulus.  
The honour  
done to Dogs

gestures and movings they conjecture his meaning for the government of their state: giving as ready obedience to his significations, as they can to any lively speaking Prince of the world: for which cause the Egyptians also picture a Dog with a Kings robe, to signifie a Magistrate. Those people of Egypt also, observe in their religious processions, and geliculations, dumb-idle-gods, to carry about with them two Dogs, one Hawk, and one Ibis, and these they call four letters: by the two Dogs, they signifie the two Hemispheres which continually watch and go over our heads: by the Hawk, the Sun; for the Hawk is a hot creature, and liveth upon destruction: by the Ibis, the face of the Moon; for they compare the black feathers in this bird to her dark part, and the white to her light. Other by the Dogs, do understand the two Tropicks, which are (as the water) to her light. Other by the Dogs, do understand the two porters of the Sun for the South and North: by the Hawk, they understand the Equinoctial or burning line, because the fynch high: by the Ibis, the Zodiack: and indeed those Painters which could most artificially decipher a Dog (as Niclaus) were greatly revered among the Egyptians.

Cañus.

The like folly (or impious beastliness) was that of Galba, who forsook the precedents of his predecessors in stamping their coin with their own image, and imprinted thereupon his fealing ring left him by his forefathers, wherein was engraven, a Dog bending upon his female. I know not for what cause, the Star in the midst of Heaven whereunto the Sun cometh about the Calends of July, was termed *Canis* (a Dog) and the whole time of the appearance of that Star, which is about thirty dayes, should be called *Dog-dayes*; but only because then the heat of the Sun doth torment the bodies of men twice so much as at other times: whereupon they attribute that to the Star (which they call *Sirius*) which rather is to be attributed to the Sun during that time every year.

Varro.

Others fable, that there is another Star close to him (called *Orion*) who was an excellent hunter, and after his death was placed among the Stars, and the Star *Canis* beside him was his hunting Dog: but by this Star called of the Egyptians, *Salachim*; and of the Grecians, *Afrocymon*, cometh that Egyptian Cynick year which is accomplished but once in 1460 years. Unto this Star were offered many sacrifices of Dogs in ancient time, whereof there can be no cause in the world, as *Ovid* well noteth in these Verses.

*Pro Canis sileto Canis hic imponitur ara:  
Et quare fiat nil nisi munus habet.*

Pliny.

As among the *Carians*, whereupon came the proverb of *Caricum Sacrificium*, for they sacrificed a Dog in stead of a Goat, and the young puppies or whelpes were also accounted amongst the most available sacrifices, for the pacifying of their Idoll gods.

Plutarch.

The *Romans* and *Grecians* had also a custom to sacrifice a Dog in their *Lycean* and *Lupercal* feasts, which were kept for the honour of *Pan*, who defended their flocks from the Wolf, and this was performed in *February* yearly, either because that the Dogs were enemies to Wolves, or else for that by their barking, they draw them away in the night time from their City: or else, because they reckoned that a Dog was a pleasing beast to *Pan*, who was the keeper of Goats: so also the *Grecians* did offer a Dog to *Hege* who hath three heads, one of a Horse, another of a Dog, and the third head in the midst of a wilde man: and the *Romans* to *Gemetra*, for the safe custody and welfare of all their household affairs.

Their household Gods (called *Lares*) were pictured and declared to the people sitting in Dogs skins, and Dogs sitting besides them; either because they thereby signified their duty to defend the house and household: or else as Dogs are terrors to Thieves and evil beasts, so these by their assistance were the punishers of wicked and evil persons: or rather that these *Lares* were wicked spirits prying into the affaires of every private household, whom God used as executioners of his wrathful displeasure upon godless men.

Fellus.

Calius.

There were Dogs sacred in the Temple of *Æsculapius*, because he was nourished by their milk; and *Jupiter* himself was called *Cyngetes*; that is, a Dog-leader; because he taught the *Arcadians* first of all to hunt away noisome beasts by the help of Dogs: so also they sacrificed a Dog to *Mars*, because of the boldness of that creature. To conclude, such was the unmemorable vanity of the Heathens in their gods and sacrifices, as it rather deserveth perpetuall oblivion then remembrance, for they joyined the shapes of men and beasts together (saith *Arnobius*) to make gods, *Omnesque deos monstris & latratoribus*, such were their *Cyncephali*, *Ophiocephali*, *Anubis*, *Hiemps*: that is as much to say, as half Men, half Dogs, half Serpents, but generally all Monsters: and for the many imaginary virtues the ancients have dreamed to bein Dogs, they also in many places have given unto their solemn funerals in their hallowed Cemeteries, and after they were dead they ceased not to magnifie them, as *Alexander*, which built a City for the honour of a Dog.

Of dishonour  
and ignobility  
of Dogs.

All this notwithstanding, many learned and wise men in all ages have reckoned a Dog but a base and an impudent creature: for the *Flamin* *Dialis* of *Jupiter* in *Rome*, was commanded to abstain from touching of Dogs, for the same reason that they were prohibited and not permitted to enter into the Cattle of *Athens*, and life of *Delos*, because of their publick and shameless copulation: and also that no man might be terrified by their presence from supplication in the Temple. The foolishness of a Dog appeareth in this, that when a stone or other thing is cast

at him, he followeth the stone, and neglecteth the hand that threw it, according to the saying of the Poet:

*Arripit ut lapidem catulus, morsuque satigat,  
Nec percussori mutua damna facit;  
Sic perique sinunt venos elaber hostes,  
Et quis nulla gravem noxia, dente petunt.*

Marcellus.

Likewise men of impudent wits, shameless behaviors in taking and eating meat, were called *Cynicks*; for which cause *Alb. new* speaketh unto *Cynicks* in this sort, You do not *O Cynici* lead abstinent and frugal lives, but resemble Dogs: and whereas this four-footed beast differeth from other creatures in four things, you only follow him in his viler and baser qualities, that is, in barking and license of *Raphyrim*, railing, in voracity and nudity, without all commendation of men.

The impudency of a Dog is eminent in all cases to be understood, for which cause that audacious *Homer*. *Antigone* son of *Cidimachus* was called a Dog, and the Furies of ancient time were pictured by black Dogs, and a Dog called *Erinyes* *Carberus* himself with his three heads, signified the multiplicity of Devils; that is, a Lions, a Wolfs, and a fawning Dogs; one for the Earth, another for the Water, and the third for the Air: for which cause *Hercules* in slaying *Carberus*, is said to overcome all temptation, vice and wickedness. for so did his three heads signifie. Other by the three heads understand the three times; by the Lion the time present; by the Wolf, the time past; and by the fawning Dog, the time to come.

It is delivered by Authors, that the root of Oliander, or else a Dogs tooth bound about the arme, do restrain the fury and rage of a Dog: also there is a certain little bone in the left side of a Toade (called *Apocynon*) for the virtue it hath in it against the violence of a Dog. It is reported by *Pliny*, that if a live Rat be put into the pottage of Dogs, after they have eaten thereof, they will never bark any more; and *Ælianus* affirmeth so much of the Weasils tail cut off from him alive, and carryed about a man; also if one carry about him a Dogs heart or liver, or the skin wherein Puppies lie in their dams belly (called the *Secundine*) the like effect or operation is attributed to them against the violence of Dogs.

There is a little black stone in *Nile* about the bigness of a Bean, at first sight whereof a Dog will run away. Such as these I saw at *Lyons* in *France*, which they called Sea-beans, and they prescribed them to be hangd about a Nurses neck to encrease her milk. But to conclude the discourse of the baleness of a Dog, those two proverbs of holy Scripture, one of our Saviour *Mat. 7. Give not that which is holy to Dogs*; and the other of *S. Peter*, 2 Epistle Chap. 2. The Dog is returned to the vomit; do sufficiently convince, that they are emblems of vice, cursed, rayling, and filthy men; which esteem not holy things, but eat up again their own vomits.

The skins of Dogs are dressed for Gloves, and close Boots, the which are used by such as have Ulcerous and swelling Legs or Limbs, for by them the afflicted place receiveth a double relief; first, it resisteth the influent humors; and secondly, it is not exasperated with Woollein. The *Turkes* colour their Dogs tails with red, and it is a custom of Hunters to take Dogs and tie them in the Woods unto trees by their itones, for by crying they provoke the Panther to come unto them.

It is not to be doubted but that the flesh of Dogs is used for meat in many places, although the opinion of *Æsop* be true and consonant to reason, that all devouring creatures, as Dogs, Foxes, and Wolves, have no good flesh for meat, because they engender melancholy; and yet *Galen* thinketh, that it is like to the flesh of a Hare, especially young Whelpes were held among the *Romans* a delicate meat, and were used by their Priests; and among Whelpes they attributed most virtue to their flesh which were eaten before they did see, for by them came no evil humor at all, as is often let down in *Plinius*.

*Petr. Martyr* and *Scaliger* do affirm of *Coxumella* and *Lucatana*, and other Islands of the new World, that the people there do eat a kind of Dog which cannot bark: These Dogs are vile to look upon like young Kids. The inhabitants of *Corfica*, which are fierce, angry, wilde, cruel, audacious, dissemblers, active and strong, do also feed upon Dogs, both wilde and tame: and it is thought that their meat is a little furtherance to their inclination, for such is the natural disposition of Dogs. And *Scilliberum* in the Book of Peregrinations affirmeth also, that the *Tartarians* in *Ussibour* do after the same manner feed upon the flesh of Dogs: from hence it cometh, that men resembling a Dog in a plain forehead and narrow, are said to be foolish; in a smooth and stretched out flatterers; those which have great voices like a Ban-dog, are strong; they which rail much (like often barking Dogs) are of a doggish, angry disposition. He that hath a great head like a Dog, is witty; he which hath a little head like an Asses, is blockish; they which have fiery eyes like Dogs, are impudent and shameless; thin lips with narrow folding corners, in Dogs is a token of generosity, and in men of magnanimity: they whose teeth hang over their canine teeth, are also adjudged railers, and virulent speakers: and as *Canarius* observeth, vain glorious braggers. A wide mouth, betokeneth a cruel, mad, and wicked disposition; a sharpe nose, an angry minde; as a round, blunt, and solid Nose, signifieth a Lions stomach and worthiness. A sharpe chin, vain babbling and wantonness; they which are small in their girting head about their loins, do much love hunting.

*Stobæus* in his wicked discourse or dispraise of Women affirmeth, that the curst, sharp, smart, curious, dainty, clamorous, implacable and wanton-rowling-eyed Women, were derived from Dogs: and *Hesiod* to amend the matter saith, when *Jupiter* had fashioned Man out of the earth, he commanded *Mercury* to infuse into him a *Canine* minde, and a clamorous inclination: but the Proverb of *Solomon* Chap. 30. concludeth the excellency of a Dog saying, *There be three things which go pleasantly, and the fourth ordereth his pace aright: The Lion which is the strongest among beasts, and feareth not the sight of any body: a hunting Dog strong in his limbs, a Goat, and a King against whom there is no rising up: by all which is deciphered a good King; for the Lion riseth not against beasts, except he be provoked; the Dog riseth not against his friends, but wilde beasts; and the He-goat goeth before his flock like a guide and keeper.*

Mansuetum.

Of the GRAY-HOUND, with a narration of all strong and great hunting DOGS.



The name of a Gray-hound.

Among the divers kinds of hunting Dogs, the Gray-hound or Grecian Dog, called *Therion* or *Elatice* (by reason of his swiftness, strength and sagacity to follow and devour wilde beast of great stature) deserveth the first place; for such are the conditions of this Dog, as *Plato* hath observed, that he is reasonably fented to finde out, speedy and quick of foot to follow, and fierce and strong to take and overcome: and yet silent, coming upon his prey at unawares, according to the observation of *Gratius*;

*Sic Canis illa juvat taciturnasupervenit hostes.*

Like the Dogs of *Acamania*, which set upon their game by stealth. Of these are the greatest Dogs of the world, which in this place are briefly to be remembered.

These have large bodies, little heads, beaked noses, but flat, broad faces above their eyes, long necks, but great next to their bodies, fiery eyes, broad backs, and most generous stomachs, both against all wilde beasts and men also. Their rage is so great against their prey, that sometimes for wrath they lose their eye-sight. They will not only set upon Bulls, Boars, and such like beasts, but also upon Lions, which *Mantuan* noteth in this verse;

*Et truceulenti Hæbor certare leonibus audent.*

Countries of Gray-hounds. Generation by Tygres.

The greatest dogs of this kind are in *India*, *Scythia*; and *Hircania*, and among the *Scythians* they joyn them with Asies in yolk for ordinary labour. The Dogs of *India* are conceived by Tygres, for the *Indians* will take divers females or Bitches, and fasten them to trees in woods where Tygres abide:

abide: whereunto the greedy ravening Tyger cometh, and instantly devoureth some one or two of them, if his lust do not restrain him, and then being so filled with meat (which thing Tygers seldom meet withall) presently he burneth in lust, and so limeth the living Bitches, who are apt to conceive by him: which being performed, he retireth to some secret place, and in the mean time the *Indians* take away the Bitches, of whom come these valorous Dogs, which retain the stomach and courage of their father, but the shape and proportion of their mother, yet do they not keep any of the first or second litter, for fear of their Tygrian stomachs, but make them away and preserve the third litter.

Of this kinde were the Dogs given to *Alexander* by the King of *Albania*, when he was going into *India*, and presented by an *Indian*, whom *Alexander* admired, and being desirous to try what virtue was contained in so great a body, caused a Bore and a Mart. to be turned out to him, and when he would not so much as lit at them, he turned Bears unto him, which likewise he disdaind, and rofe not from his kennel; wherewithal the King being moved, commanded the heavy and dull Beast (for so he termed him) to be hanged up: his keeper the *Indian* informed the King, that the Dog respected not such Beasts, but if he would turn out unto him a Lyon, he should see what he would do.

Immediately a Lyon was put unto him, at the first sight: whereof he rose with speed (as if never before he saw his match or adversary worthy his strength) and bristling at him, made force upon him, and the Lyon likewise at the Dog; but at the last, the Dog took the chaps or shew of the Lyon into his mouth, where he held him by main strength, until he strangled him, do the Lyon what he could to the contrary; the King desirous to save the Lyons life, willed the Dog should be pulled off, but the labour of men and all their strength was too little, to loosen tholeireful and deep biting teeth which he had fastned. Then the *Indian* informed the King, that except some violence were done unto the Dog to put him to extreame pain, he would sooner dye then let go his hold; whereupon it was commanded to cut off a piece of the Dogs tail, but the Dog would not remove his teeth for that hurt: then one of his legs were likewise severed from his body, wherewith the Dog seemed not appalled; after that another leg, and so consequently all four, whereby the trunk of his body fell to the ground, still holding the Lyons snout within his mouth; and like the spirit of of some malicious man, chusing rather to dye then spare his enemy. At the last, it was commanded to cut his head from the body, all which the angry Beast endured, and so left his bodiless head hanging fast to the Lyons jaws: wherewith the King was wonderfully moved, and sorrowfully repented his rashness in destroying a Beast of so noble a spirit, which could not be daunted with the presence of the King of Beasts: chusing rather to leave his life, then depart from the true strength and magnanimity of minde. Which thing the *Indian* perceiving in the King, to mitigate the Kings sorrow, presented unto him four other Dogs of the same quantity and nature, by the gift whereof he put away his passion, and received reward with such a recompence, as well beleemed the dignity of such a King, and also the quality of such a present.

*Pliny* reporteth also, that one of these did fight with singular courage and policy with an Elephant: and having got hold on his side, never left till he overthrew the Beast, and perished underneath him. These Dogs grow to an exceeding great stature; and the next unto them are the *Albanian* Dogs. The *Arcadian* Dogs are said to be generated of Lyons. In *Canaria*, one of the Fortunate Islands, their Dogs are of an exceeding stature.

The Dogs of *Gret* are called *Diapom*, and fight with wilde Boars: the Dogs of *Ephrus* called *Gba*, of a City *Chaan*, are wonderfully great and fierce; they are likewise called *Moloff*, of the *Seneca*, people of *Ephrus* so tearmed, these are fained to be derived of the Dog of *Cephalus*, the first Gray-hound whom stories mention: and the Poets say, that this Gray-hound of *Cephalus*, was first of all fashioned by *Vulcan* in *Monsian* brals, and when he liked his proportion, he also quickned him with a soul, and gave him to *Jupiter* for a gift, who gave him away again to *Europa*, she also to *Minos*, *Minos* to *Procris*, and *Procris* gave it to *Cephalus*: his nature was so resitible, that he overtook all that he hunted, like the *Thymeston* Fox. Therefore *Jupiter* to avoid confusion, turned both the incomprehensible Beasts into stones. This *Molothus*, or *Moloffus* Dog, is also framed to attend the foids of Sheep, and doth defend them from Wolves and Theeves, whereof *Virgil* writeth thus:

*Veloxi Sparta catulus atremque Molossim  
Pasce fero pingui, nunquam custodibus illis  
Nocturnum sibi fures incursusque luporum  
Aut imparatus a tergo borrebis liberos.*

These having taken hold, will hardly be taken off again, like the *Indian* and *Persian* Dogs, for which cause they are called *incommodissim*, that is, *made nescit*, such as know no mean, which caused *Horace* to give counsel to keep them tyed up, saying;

*Teneant acres lora molossos.*

The people of *Ephrus* do use to buy these Dogs, when they dye, and of this kinde were the Dogs of *Scylla*, *Nicomedes*, and *Eupolides*. The *Hircanian* Dogs are the same with the *Indian*. The *Pæman*, *Persian*, and *Median*, are called *Symbæro*, that is companions, both of hunting; and fighting, as *Gratius* writeth:

*Induciliu dat prælia Medus.*

The

*Xenophon.*  
Ciculus.  
Of people that  
live upon the  
milk of Dogs.

*Ælianus.*

*Ælianus.*  
Dogs devour-  
ers of men.  
*Valerius*  
*Max.*

The Dogs of *Loeus*, and *Lacena*, are also very great, and fight with Bores. There are also a kinde of people called *Cynomeli*, neer *India*, so called, because for one half of the year they live upon the milk of great Dogs, which they keep to defend their Country from the great oppression of wilde Cattel, which descend from the Woods and Mountains of *India* unto them yearly, from the Summer solstice to the middle of Winter, in great numbers or swarms, liee Bees returning home to their Hives and Honey-combes: These Cattel set upon the people, and destroy them with their horns, except their Dogs be present with them, which are of great stomach and strength, that they easily tear the wilde Cattel in pieces, and then the people take such as be good for meat to themselves, and leave the other to their Dogs to feed upon: the residue of the year they not only hunt with these Dogs, but also milk the females, drinking it up like the milk of Sheep or Goats. These with these Dogs have also devoured men, for when the servant of *Dionysus* the *Cynick*, ran away from great Dogs, being taken again and brought to *Delphos*, for his punishment he was torn in pieces by his master, being taken again and brought to *Delphos*, for his punishment he was torn in pieces by his master. *Euripides* also is laid to be slain by Dogs; whereupon came the proverb *Cynos dike*, a Dogs revenge: for King *Archelaus* had a certain Dog which ran away from him to *Thracia*, and the *Thracians* (as their manner was) offered the same Dog in sacrifice, the King hearing thereof, laid a punishment upon them for that offence, that by a certain day they should pay a talent; the people breaking day, suborned *Euripides* the Poet (who was a great favourite of the Kings) to mediate for them, for the release of that fine: whereunto the King yielded: afterward as the said King returned from hunting, his Dogs stragling abroad, met with *Euripides*, and tore him in pieces, as if they sought revenge on him, for being bribed against their fellow which was slain by the *Thracians*. But concerning the death of this man, it is more probable, that the Dogs which killed him, were set on by *Aridaus* and *Crotanus*, two *Thessalian* Poets, his emulators and corivals in Poetry, which for the advancement of their own credit, cared not in most savage and barbarous manner, to make away a better man than themselves. There were also other famous men which perished by Dogs; as *Alcon*, *Thraus*, and *Linus*; of *Thraus*, *Ovid* writeth thus;

*Prædaque sit illis quibus est Laconia Delos*  
*Amo dum rapto non audeant Thraus.*

And of *Linus* and *Alcon* in this manner;

*Quique verconda speculantem membra Diana,*  
*Quique Crotopiden diripere Linum.*

*Ranifus.*

*Ranif. Text.*

*Lucian* that scoffing *Apolatæ*, who was first a Christian, and afterward endeavoured all his wit to rail at Christian Religion, even as he lacerated and rent his first profession, so was he rent in pieces by Dogs; and *Heraclitus* the Philosopher of *Athens*, having been long sick, and under the hands of Physicians, he oftentimes anointed his body with Bogils sewet, and on a day having so anointed himself, lying abroad sleeping in the Sun, the Dogs came, and for the desire of the fat tore his body in pieces. I cannot here forget that memorable story of two Christian Martyrs, *Gorgonius* and *Dorotheus*, which were put to death under *Diocletian* in the ninth persecution, and when they were dead, their carcases were cast unto hungry Dogs of this kinde, kept for such purposes, yet would not the Dogs once so much as stir at them, or come neer to touch them; and because we may judge that the ravening nature of these creatures was restrained by divine power: We also read that when *Benignus* the Martyr, by the commandment of *Aurelian*, was also thrown alive to be devoured of these Dogs, he escaped as free from their teeth, as once *Daniel* did from the Lyons den. I may also adde unto these the Dogs of *Alania* and *Myria*, called *Mastini*, who have their upper lips hang over their neather, and look fierce like Lyons, whom they resemble in neck, eyes, face, colour, and nails; falling upon Bears, and Boars, like that which *Amibolus* speaketh of, that leaped into the Sea after a Dolphin, and so perished; or that called *Lydia*, slain by a Boar; whose Epitaph *Martius* made as followeth:

*Amphibestros inter nutrita magistros*  
*Venatrix sibi aspera, blanda domi,*  
*Lydia dicebat, domino fassissima dextro,*  
*Qui non Erigones mallet habere Canem,*  
*Nec qui Diææ Cephalum de genit fecutus.*  
*Lucifera pariter venit ad aspra deæ.*  
*Non me longa dies, nec inutilis absulsi ætas,*  
*Qualia Dulybio fata fuere cani.*  
*Fulmineo spumantis apri sum deus peremptus,*  
*Quantus erat Cælydon, aut Erymanthe iuvr.*  
*Nec quoror, infernas quamvis cito rapta per umbras:*  
*Non potui fato nobilior mori.*

The French  
Dogs.

There be in France certain great Dogs (called *Auges*) which are brought out of Great Britain, to kill their Bears, Wolves, and wilde Boars; these are singularly swift and strong, and their leaders,

the better to arm them against the teeth of other Beasts, cover some of their parts with thick clouts, and their necks with broad collars, or else made of Badgers skins. In *Gallia Narbon*, they call them *Limier*, and the *Polonians* call all made Dogs for the Wolf, and such like Beasts, *Vistli*: and peculiarly for the Bear and Bore, *Cherazii*, for Hares and Fowl, *Pobiednizeli*, and Dogs of a middle scantling betwixt the first and the second, *Vstli*.

Gray-hounds are the least of these kindes, and yet as swift and fierce as any of the residue, refusing no kinde of Beast, if he be turned up thereunto, except the Porcupine, who calteth her sharp pens into the mouth of all Dogs. The best Gray-hound hath a long body, strong and reasonable great, a neat sharp head, and splendid eyes, a long mouth, and sharp teeth, little ears and thin gristles in them; a straight neck, and a broad and strong breast; his fore-legs straight and short, his hinder-legs long and straight, broad shoulders, round ribs, fleshy buttocks, but not fat, a long tail, strong and full of sinews, which *Nemæus* describeth elegantly in these verses;

*Sic curvibus albis*  
*Cosartum sub fide detinet proha catinam:*  
*Renibus ampla satis validis diductaque coras*  
*Sit rigidie, multaque gerat sub pectore lato,*  
*Que sensim rursus sicca se colligit abvo:*  
*Chique nimis molles fluitant in curvis artus.*  
*Elige tunc cursu facilem, faciliusq; recessu,*  
*Dum superant vires, dum late stare juvenius.*

The qualities  
and parts of a  
good Gray-  
hound.  
*Pliny.*  
*Xenoph.*

Of this kinde, that is the best to be chosen among the whelps, which weigheth lightest: for it will be soonest of the game, and so hang upon the greater beasts hindering their swiftness, untill the stronger and heavier Dogs come to help: and therefore besides the marks, or necessary good parts in a Gray-hound already spoken of, it is requisite that he have large ribs, and a broad mid-ribs or film about his heart, that so he may take his breath in and out more easily; a small belly, for if it be great, it will hinder his speedy course; likewise that he have long legs; thin and soft hairs; and these must the Hunter lead on the left hand if he be a foot, and on the right hand if he be on Horseback.

The best time to train them, and train them to their game, is at twelve months old, howbeit some hunt them at ten months, if they be males, and at eight months, if they be females; yet is it surest not to train them, or train them to run any long course till they be twenty months old, according to the old saying,

*Latetis tunc primam consuecunt colla ligari,*  
*Iam cum bis demt Fibrae reparaverit ortu,*  
*Sed parvus vallis spatii spiritus novelli*  
*Nec cursus vitæ patet, &c.*

Keep them also in the leam or slip while they are abroad, untill they see their course, I mean, the Hare or Deer, and loosen not a young Dog, till the game have been on foot a good season, lest if he be greedy of the prey he strain his limbs till they break. When the Hare is taken, divide some part thereof among your Dogs, that so they may be provoked to speed by the sweetness of the flesh.

The *Lacedæmon* Gray-hound was the best breed, they were first bred of a Fox and a Dog, and therefore they were called *Alpeides*, these admit copulation in the eight month of their age, and sometime in the sixt, and so continue bearing as long as they live, bearing their burthen the sixth part of a year, that is, about sixty days, one or two, more or less, and they better conceive, and are more apt to procreation while they are kept in labour, then when they lie idle without hunting. And these *Lacedæmon* Dogs differ in one thing from all other Dogs whatsoever, for whereas the male out-liveth in vulgar Dogs of all Countries the female, in these the female out-liveth the male, yet the male performeth his labour with more alacrity, although the female have the sharper sense of smelling.

The noblest kinde of Dogs, that the *Polonians* use, which they be led abroad, and seldom bark: they are the best which are longer than they are high, and which cause they use this artificial invention to stretch their necks; they dig a deep hole in the earth, wherein they set the Gray-hounds meat, who being hungry, thrusteth down his head to take it, but finding it to be past his reach, stretcheth his neck above the measure of nature, by which means his neck is very much lengthened. Other place the Gray-hound in a ditch; and his neck above him, and so he reacheth upward, which is more probable. It is the property of these Dogs to be angry with the lesser barking Curs, and they will not run after every kind of Beast, by secret instinct of nature, discerning what kinde of Beast is worthy or unworthy of their labour, disdainful to meddle with a little or vile creature. They are nourished with the same that the smaller hunting Dogs are; and it is better to feed them with milk then whay. There are of this kinde called *Veltri*, and in *Italian*, *Veltra*; which have been procreated by a Dog and Leopard, and they are accounted the swiftest of all other. The Gray-hounds which are most in request among the *Germani*, are called *Windspil*, alluding to compare their swiftness with

An invention  
to make a  
Gray-hound  
have a long  
neck.  
The diet of a  
good Gray-  
hound.

with the winde, the same are also called *Wurfschwinn* and *Heizhund*, and *Falco* a *Falcon*, is a common name whereby they call these Dogs. The French make most account of such as are bred in the Mountains of *Dalmatia*, or in any other Mountains, especially of *Turkey*; for such have hard feet, long ears, and bristle tails.

There are in *England* and *Scotland*, two kinds of hunting Dogs, and no where else in all the world; the first kinde they call in *Scotland*, *Ane Rache*, and this is a foot-smelling creature, both of wilde Beasts, Birds, and Fishes also, which lie hid among the Rocks; the female hereof in *England*, is called a *Brace*. The second kinde is called in *Scotland*, a *Sluth-bound*, being a little greater then the hunting Hound; and in colour for the most part brown, or sandy-spotted. The greater sense of smelling is so quick in these, that they can follow the foot-steps of thieves, and pursue them with violence untill they overtake them; and if the thief take the water, they call in themselves; also, and swim to the other side, where they finde out again afresh their former labour, untill they finde the thing they seek for: for this is common in the Borders of *England* and *Scotland*, where the people were wont to live much upon theft; and if the Dog brought his leader unto any house, where they may not be suffered to come in, they take it for granted, that there is both the stolen goods, and the thief also hidden.

The Hunting Hound of Scotland called *RACHE*, and in English a *HOUND*.

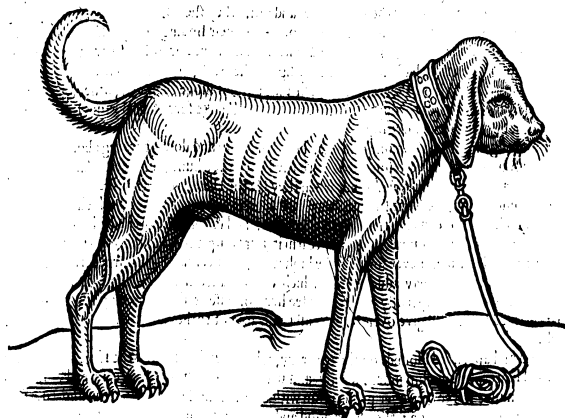


The *SLUTH-HOUND* of Scotland, called in Germany a *SCHLATTHUND*.



The

The English *BLOOD-HOUND*.



WE are to discourse of lesser hunting Dogs in particular, as we finde them remembered in any Histories & descriptions, Poets or other Authors, according to the several Countries of their breed and education; and first for the *British* Dogs, their nature and qualities hereafter you shall have in a several discourse by it self. The *Blood-hound* differeth nothing in quality from the *Scotish* *Sluth-hound*, having they are greater in quantity, and not alway of one and the same colour; for among them they are sometime red, fanded, black, white, spotted, and of such colour as are other Hounds, but most commonly brown or red.

The virtue of smelling called in *Latine*, *Sagacitas*, is attributed to these as to the former hunting Hound, of whom we will first of all discourse, and for the qualities of this sense, which maketh the Beast admirable, *Plautus* seemeth to be of opinion, that it received this title from some Magicians or sage Warders (called *Sages*) for this be faith, speaking of this Beast: *Canum hanc esse quidem Magis par juit: nam adepol sagax habet*: It is also attributed to Mice, not for smelling, but for the sense of their palate or taste; and also to Greie: In a Dog it is that sense which searcheth out and decyareth the routes, fourses, and lodgings of wilde Beasts, as appeareth in this verse of *Virg.* *Andronicus*.

In Carcul.  
What smelling  
or sagacity in  
Dogs is.

Can, prius fida Canum uirum, et non hominum, digne odoriferos ad cerna: subtile canes.

And for this cause it hath his proper Epithets; as *Oloro canum vis, promissa canum vis, et naribus mare*, & *utitur*: *Pincians* called this kinde *Plaudis*, for so did *Festus* before him, and the *Germani*, *Spruband*; and *Leithund*, *layhund*, because their ears are long thin, and hanging down, and they differ not from vulgar Dogs in any other outward proportion, except only in their cry or barking voyce.

The nature of these is, to be led on by the voyce and words of their leader, to call about for the sitting of the Beast, and following found in, with continual cry to follow after it: all it be remend, without changing for any other, so that sometimes the Hunters themselves take up the Beasts, at least wise the Hounds seldom fail to kill it. They seldom bark, except in their hunting chace; and then they follow their game through woods, thickets, thorns, and other difficult places, being alway obedient and attentive to their leaders voyce, so as they may not go forward when the leader biddeth, nor yet remain near to the Hunters, whereunto they are framed by Art and discipline, rather then by any natural instinct.

Belliferius.

And T  
...  
...

The *White Hounds* are said to be the quickest scented and surest nosed, and therefore best for the Hare: the black ones for the Boar, and the red ones for the Hart and Roe: but hereunto I cannot agree, because their colour (especially of the twilatter) are too like the game they hunt; although there can be nothing certain collected of their colour, yet is the black Hound harder and braver to endure cold, then the other which is white. In Italy they make account of the *Blond* one, especially white and yellowish, for they are quicker nosed: they must be kept eyed up all they time, yet so as they be let loose now and then a little to ease their bellies, for it is necessary that their bellies be kept sweet and dry.

It is questionable how to discern a Hound of excellent sense: yet as *Blondus* faith the square and flat nose is the best sign and index thereof: likewise a small head, having all his legs of equal

The choice of  
Hound of the  
best nose.













Of these three sorts or kinds so mean I to entreat, that the first in the first place, the last in the last room, and the middle sort in the middle seat be handled. I call them universally all by the name of *English Dogs*, as well because *England* only, as it hath in it *English Dogs*, so it is not with the *Scottish*, as also for that we are inclined and delighted with the noble game of hunting, for we *Englishmen* are addicted and given to that exercise and painful pastime of pleasure, as well for the plenty of flesh which our Parks and Forests do foster, as also for the opportunity and convenient leisure which we obtain; both which the *Scots* want. Wherefore seeing that the whole estate of kindly hunting consisteth principally in these two points, in chasing the beast that is in hunting, or in taking the bird that is in fowling; It is necessary and requisite to understand that there are two sorts of Dogs by whose means the feats within specified are wrought, and these practises of activity cunningly and curiously compassed, by two kinds of Dogs, one which rouseth the beast and continueth the chase, another which springeth the bird, and bewrayeth the flight by pursuit. Both which kinds are termed of the *Latins* by one common name, that is, *Cani Venatici*, hunting Dogs. But because we *Englishmen* make a difference between hunting and fowling, for they are called by these several words, *Venatio*, & *Ascupim*, so they term the Dogs whom they use in these sundry games by diverse names, as those which serve for the beast, are called *Venatici*, the other which are used for the fowl are called *Ascupim*.

The first kinde called *Venatici* I divide into five sorts, the first in perfect smelling, the second in quick spying, the third in swiftness and quickness, the fourth in smelling and nimbleness, the fifth in subtilty and deceitfulness, herein these five sorts excell.

#### Of the DOG called a *HARRIER*; in *Latin*, *Leverarius*.

That kinde of Dog whom nature hath endued with the virtue of smelling, whose property it is to use a lustiness, a readiness, and a couragefulness in hunting, and draweth into his nostrils the air or sent of the beast pursued and followed, we call by this word *Sagax*, the *Greeks* by this word *Lebneten* of tracing or chasing by the foot, or *Rinelen*, of the nostrils, which be the instruments of smelling. We may know these kinde of Dogs by their long, large and bagging lips, by their hanging ears, reaching down both sides of their chaps, and by the indifferant and measurable proportion of their making. This sort of Dogs we call *Leverarius*, *Harrier*, that I may comprise the whole number of them in certain specialities, and apply to them their proper and peculiar names, for so much as they cannot all be reduced and brought under one sort, considering both the sundry uses of them, and the difference of their service whereto they be appointed. Some for the Hare, the Fox, the Wolf, the Hart, the Buck, the Badger, the Otter, the Polecat, the Lobster, the Weasell, the Cony, &c. Some for one thing and some for another.

As for the Cony, whom we have lastly set down, we use not to hunt, but rather to take it, sometime with the net, sometime with a Ferret, and thus every several sort is notable and excellent in his natural quality and appointed practise. Among these sundry sorts, there be some which are apt to hunt two divers beasts, as the Fox other whiles, and other whiles the Hare, but they hunt not with such towardness and good luck after them, as they do that whereunto nature hath formed and framed them, not only in external composition and making, but also in inward faculties and conditions; for they swerve oftentimes, and do otherwise then they should.

#### Of the DOG called a *TERRAR*; in *Latin*, *Terrarius*.

Another sort there is which hunteth the Fox, and the Badger, or Gray only, whom we call *Terrari*, because they (after the manner and custom of Ferrets in searching for Conies) creep into the ground, and by that means make afraid, nip, and bite the Fox and the Badger in such sort, that either they tear them in pieces with their teeth, being in the bosom of the earth, or else hale and pull them perforce out of their lurking Angles, darke dungeons, and close caves, or at the least through conceived fear, drive them out of their hollow harbors, in so much that they are compelled to prepare speedy flight, and being desirous of the next (albeit not the safest) refuge, are otherwise taken and intrapped with snares and nets laid over holes to the same purpose. But these be the least in that kinde called *Sagax*.

#### Of the DOG called a *BLOOD-HOUND*; in *Latin*, *Sanguinarium*.

The greater sort which serve to hunt, having lips of a large size, and eares of no small length, do not only chase the beast whiles it liveth (as the other do of whom mention above is made) but being dead also by any manner of casualty, make recourse to the place where it lyeth, having in this point assured and infallible guide; namely, the sent and favour of the blood sprinkled here and there upon the ground. For whether the beast being wounded, doth notwithstanding enjoy life, and escapeth the hands of the huntsman, or whether the said beast being slain is conveyed cleanly out of the Park (so that there be some signification of blood shed) these Dogs with no

lesse facility and easiness, then avidity and greediness can disclose and bewray the same by smelling, applying to their pursuit, agility and nimbleness, without tediousness; for which consideration, of a singular speciality they deserved to be called *Sanguinarium* Blood-hounds. And albeit peradventure it may chance, (as whether it chanceth seldom or sometime I am ignorant) that a piece of flesh be subtilly stole, and cunningly conveyed away with such provisos and precautions, as thereby all appearance of blood is either prevented, excluded, or concealed, yet these kinde of Dogs by certain direction of an inward assured notice and privie mark, pursue the deed-doers, through long lanes, crooked reaches, and weary ways, without wandering awry out of the limits of the land whereon these desperate purloiners prepared their speedy passage. Yea, the natures of these Dogs is such, and so effectual is their foresight, that they can bewray, separate, and pick them out from among an infinite multitude and an innumerable company, creep they never so far into the thickest throng, they will finde him out notwithstanding he lie hidden in wilde Woods, in close and overgrown Groves, and lurk in hollow holes apt to harbour such ungracious guests.

Moreover, although they should passe over the water, thinking thereby to avoid the pursuit of the Hounds, yet will not these Dogs give over their attempt, but presuming to swim through the stream, persevere in their pursuit, and when they be arrived and gotten the further bank, they hunt up and down, to and fro run they, from place to place shift they, until they have attained to that plot of ground where they passed over. And this is their practise, if perdy they cannot at the first time smelling, finde out the way which the deed-doers took to escape. So at length get they that by art, cunning, and diligent endeavour, which by fortune and luck they cannot otherwise overcome. In so much as it seemeth worthily and wisely written by *Helianus* in his 6. Book and 39. Chapter, *To enlumination hgi diallecion*, to be as it were naturally infused into these kind of Dogs. For they will not pause or breathe forth from their pursuit untill such time as they be apprehended and taken which committed the fact.

The owners of such Hounds use to keep them in close and dark kennels in the day, and let them loose at liberty in the night season, to the intent that they might with more courage and boldness practise to follow the felon in the evening and solitary hours of darkness, when such ill disposed varlets are principally purposed to play their impudent pranks. These Hounds (upon whom this present portion of our treatise runneth) when they are to follow such fellows as we have before rehearsed, use not that liberty to range at will, which they have otherwise when they are in game, (except upon necessary occasion whereon dependeth an urgent and effectual perswasion) when such purloyners make speedy way in flight, but being restrained and drawn back from running at random with the leame, the end whereof the owner holding in his hand is led, guided and directed with such swiftness and slowness (whether he go on foot, or whether he ride on horseback) as he himself in heart would wish for the more easie apprehension of these venturous varlets.

In the borders of *England* and *Scotland*, (the often and accustomed stealing of Cattel so procuring) these kind of Dogs are very much used, and they are taught and trained up first of all to hunt Cattel, as well of the smaller as of the greater growth; and afterwards (that quality relinquished and left) they are learned to pursue such pestilent persons as plant their pleasure in such practises of purloining as we have already declared. Of this kind there is none that taketh the Water naturally, except it please you so to supple of them which follow the Otter, which sometimes haunt the land, and sometime use the water. And yet nevertheless all the kinde of them boyling and broyling with greedy desire of the prey which by swimming passeth through river and flood, plunge amidst the water and passethe stream with their paws.

But this property proceedeth from an earnest desire wherewith they be inflamed, rather then from any inclination, issuing from the ordinance and appointment of nature. And albeit some of this sort in *English* be called *Brabe*, in *Scottish*, *Ragbe*, the cause thereof lieth in the sex, and not in the general kinde. For we *Englishmen* call Bitches belonging to the hunting kind of Dogs, by the tearm above mentioned. To be short, it is proper to the nature of Hounds, some to keep silence in hunting untill such time as there is game offered. Other some so soon as they smell out the place where the beast lurketh, to bewray it immediately by their importunate barking, notwithstanding it be far and many furlongs off, couching close in his cabin. And these Dogs the younger they be, the more wantonly bark they, and the more liberally; yet oftentimes without necessity, so that in them, by reason of their young years and want of practise, small certainty is to be reposed. For continuance of time, and experience in game, minisheth to these Hounds, not only cunning in running, but also (as in the rest) an assured foresight what is to be done principally, being acquainted with their Masters watchwords, either in revoking or imboldening them to serve the game.







which effect is performed by their moderate heat. Moreover the disease and sickness changeth his place and entrench (though it be not precisely marked) into the Dog, which to be truth, experience can testify, for these kinde of Dogs sometimes fall sick, and sometimes die, without any harme outwardly enforced, which is an argument that the disease of the Gentleman, or Gentlewoman or owner whatsoever, entrench into the Dog by the operation of heat intermingled and infected. And thus have I hitherto handled Dogs of a gentle kind whom I have comprehended in a triple division. Now it remaineth that I annex in due order, such Dogs as be of a more homely kinde.

Dogs of a course kinde serving many necessary uses, called in *Latin Canes rustici*, and first of the *Shepherds Dogs*, called in *Latin, Canis Pastoralis*.

**T**he first kinde, namely the Shepherds hound, is very necessary and profitable for the avoiding of harmes, and inconveniences which may come to men by the means of beasts. The second sort serve for succour against the snares and attempts of mischievous men. Our Shepherds Dog is not huge, vast and big, but of an indifferent stature and growth, because it hath not to deal with the bloudthirsty Wolfe, thence there be none in *England*, which happy and fortunate benefit is to be ascribed to the pious Prince *Edgar*, who to the intent that the whole Countrey might be evacuated and quite cleared from Wolves, charged and commanded the *Welshmen* (who were pelted with these butcherly beasts above measure) to pay him yearly tribute (note the wisdom of the King) three hundred Wolves. Some there be which write that *Ludwal* Prince of *Wales* paid yearly to King *Edgar* three hundred Wolves in the name of an exaction (as we have said before). And that by the means hereof, within the compass and term of four years, none of those noisome and pestilent beasts were left in the coasts of *England* and *Wales*. This *Edgar* wore the Crown royal, and bare the Scepter imperial of this Kingdom, about the year of our Lord Nine hundred fifty nine. Since which time we read that no Wolf hath been seen in *England*, bred within the bounds and borders of this Countrey, marry there have been divers brought over from beyond the Seas, for greediness of gain and to make money, for gazing and gaping, staring and standing to see them, being a strange beast, rare, and seldom seen in *England*. But to return to our Shepherds Dog: This Dog either at the hearing of his Masters voice, or at the wagging and whistling in his fist, or at his shrill and hoarse hissing bringeth the wandering weathers and straying Sheep into the self same place where his Masters will and wish is to have them, whereby the Shepherd reapeth this benefit, namely that with little labour and no toil or moving of his feet he may rule and guide his flock, according to his own desire, either to have them go forward, or to stand still, or to draw backward, or to turn this way, or take that way. For it is not in *England*, as it is in *France*, as it is in *Flanders*, as it is in *Syria*, as it is in *Agartaria*, where the Sheep follow the Shepherd, for here in our Countrey the Shepherd followeth the Sheep. And sometimes the straying Sheep when no Dog runneth before them, nor goeth about and beside them, gather themselves together in a flock, when they hear the Shepherd whistle in his fist, for fear of the Dog (as I imagine) remembering this (if unreasonable creatures may be reported to have memory) that the Dog commonly runneth out at his Masters warrant, which is his whistle. This have we oftentimes diligently marked in taking our journey from Town to Town, when we have heard a Shepherd whistle we have rained in our horse and stood still a space, to see the proof and tryall of this matter. Furthermore, with this Dog doth the Shepherd take Sheep for the slaughter, and to be healed if they be sick, no hurt or harm in the world done to the simple creature.

Of the *MASTIVE*, or *BANDOG*; called in *Latin, Villaticus*, or *Catenarius*.

**T**his kind of Dog called a Mastive or Bandog is vast, huge, stubborn, ugly, and eager, of a heavey and bourthenous body, and therefore but of little swiftness, terrible, and frightful to behold, and more fierce and fell then any *Arcadian* cur (notwithstanding they are said to have their generation of the violent Lion.) They are called *Villatici*, because they are appointed to watch and keep farm-places and Countrey Cottages sequestred from common recourse, and not abutting upon other houses by reason of distance, when there is any fear conceived of Thieves, Robbers, Spoilers, and Night wanderers. They are serviceable against the Fox and Badger, to drive wilde and tame Swine out of Meadows, Pastures, Glebelands, and places planted with fruit, to bait and take the Bull by the ear, when occasion so requireth. One Dog or two at the utmost is sufficient for that purpose, be the Bull never so monstrous, never so fierce, never so furious, never so stern, never so untamable. For it is a kind of Dog capable of courage, violent and valiant, striking cold fear into the hearts of men, but standing in fear of no man, in so much that no weapons will make him shrink, nor abridge his boldness. Our *Englishmen* (to the intent that their Dogs might be more fell and fierce) assist nature with art, use and custom, for they teach their Dogs to bait the Bear, to bait the Bull and other such like cruell and bloody Beasts (appointing an overseer of the game) without any Collar to defend their throats, and oftentimes they train them

them up in fighting and wrestling with any man having for the safeguard of his life, either a Pikestaffe, a Club, or a sword, and by using them to such exercises as these, their Dogs become more sturdy and strong. The force which is in them surmounteth all belief, the fast hold which they take with their teeth exceedeth all credit, three of them against a Bear, four against a Lion are sufficient, both to trie matters with them, and utterly to overmatch them. Which thing *Henry* the seventh of that name, King of *England* (a Prince both politick and warlike) perceiving on a certain time (as the report runneth) commanded all such Dogs (how many so ever were in number) should be hanged, being deeply displeased, and conceiving great disdain, that an ill favoured rascal Cur should with such violent villany, assault the valiant Lion King of all beasts. An example for all subjects worthy remembrance, to admonish them, that it is no advantage to them to rebell against the regiment of their Ruler; but to keep them within the limits of loyalty. I read an History answerable to this of the self same *Henry*, who having a notable and an excellent fair Falcon, it fortuned that the Kings Falconers, in the presence and hearing of his grace, highly commended his Mijesties Falcon, saying, that it feared not to intermeddle with an Eagle, it was so venturesome a Bird and so mighty; which when the King heard, he charged that the Falcon should be killed without delay, for the self same reason (as it may seem) which was rehearsed in the conclusion of the former history concerning the same King. This Dog is called in like manner, *Catenarius*, a *Catena*, of the chain wherewith he is tyed at the gates in the day time, lest being loose he should do much mischief, and yet might give occasion of fear and terror by his big barking. And albeit *Cicero* in his Oration had *pro S. Rosi*, be of this opinion, that such Dogs as bark in the broad day light should have their legs broken, yet our Countrymen on this side the Seas, for their carelessnes of life setting all at cinque and sice are of a contrary judgement. For Thieves rogue up and down in every corner, no place is free from them, no not the Princes palace, nor the Countreymans cottage. In the day time they practise pilfering, picking, open robbing, and privie stealing, and what legerdemain lack they? not fearing the shameful and horrible death of hanging.

The cause of this inconvenience doth not only issue from nipping need and wringing want, for all that steal are not pinched with poverty, some steal to maintain their excessive and prodigal expences in apparel, their lewdness of life, their haughtines of heart, their wantonness of manners, their wilful idleness, their ambitious bravery, and the pride of the fawcy *Salacomes me galatrimon*, vain glorious and arrogant in behaviour, whose delight dependeth wholly to mount nimbly on horse-back, to make them leap lustily, spring and prance, gallop and amble, to run a race, to winde in compass, and so forth, living altogether upon the fatenes of the spoil. Other some there be which steal, being thereto provoked by penury and need, like masterless men applying themselves to no honest trade, but ranging up and down, impudently begging and complaining of bodily weakness where is no want of ability. But valiant *Valentine* the Emperor, by wholesome lawes provided that such as having no corporal tickness, sold themselves to begging, pleaded poverty with pretended infirmity, and cloaked their idle and slothful life with colourable shifts and cloudy cozening, should be a perpetual slave and drudge to him, by whom their impudent idleness was bewrayed, and laid against them in publick place, lest the insufferable slothfulness of such vagabonds should be burthenous to the people, or being so hateful and odious, should grow into an example.

*Alfredus* likewise in the Government of his Common-wealth, procured such encrease of credit to justice and upright dealing by his prudent Acts & Statutes, that if a man travelling by the high way of the Countrey under his dominion, chanced to lose a budget full of Gold, or his casket filled with things of great value, late in the evening, he should finde it where he lost it, safe, sound, and untouched the next morning, yet (which is a wonder) at any time for a whole moneths space if he sought for it, as *Ingulphus Cryladensis* in his history recordeth. But in this our unhappy age, in these (I say) your devilish days, nothing can escape the claws of the spoiler, though it be kept never so sure within the house, albeit the doors be lockt and bolted round about. This Dog in like manner of the *Grecians* is called *Oikourus*.

Of the *Latinists*, *Canis Celos*; in *English*, the Dog-keeper.

Borrowing his name of his service, for he doth not only keep Farmers houses, but also Merchants mansions, wherein great wealth, riches, substance and costly stuffe is kept. And therefore were certain Dogs found and maintained at the common costs and charges of the Citizens of *Rome* in the place called *Capitolium*, to give warning of Thieves coming. This kind of Dog is called.

In *Latin*, *Canis Lanarius*, in *English*, the Butchers Dog.

So called for the necessity of this use, for his service affordeth great benefit to the Butcher as well in following as in taking his Cattel, when need constraineth, urgeth, and requireth. This kinde of Dog is likewise called,

In *Latin*, *Molosicus*, or *Molosius*.

after the name of a Countrey in *Epirus* called *Molosia*, which harboureth many stout, strong, and sturdy Dogs of this sort, for the Dogs of that Countrey are good indeed, or else there is no truth to be had in the testimony of writers. This Dog is also called,

In *Latin*, *Canis Mandatarius*, a Dog messenger, or Carrier, upon substantial consideration, because at his Masters voice and commandment, he carry-

eth letters from place to place, wrapped up cunningly in his leather collar, fastned thereto, or sowed close therein, who lest he should be hindered in his passage, useth these helps very skillfully, namely resistance in fighting if he be not overmatched, or else swiftness and readinesse in running away, if he be unable to buckle with the Dog that would faine have a snatch at his skin. This kinde of Dog is likewise called,

In *Latin*, *Canis Lunarius*; in *English*, the *Mooner*.

Because he doth nothing else but watch and ward at an inch, waiting the wearisome night season without slumbering or sleeping, bawling and wailing at the Moon (that I may use the word of *Niniv*) a quality in mine own opinion strange to consider. This kind of Dog is also called,

In *Latin*, *Aquarius*; in *English*, a *Water-drawer*.

And these be of the geater and the weightier sort, drawing water out of wells and deep pits, by a wheel which they turn round about by the moving of their burthenous bodies. This Dog is called in like manner,

*Canis Carcinarius* in *Latin*, and may aptly be *Englished*, a *Tinkers Cur*.

Because with marvellous patience they bear big budgets fraught with Tinkers tools, and metal meet to mend kettles, porrage-pots, skillets, and chafers, and other such like trumpery requisite for their occupation and loytering trade, easing him of a great burthen, which otherwise he himself should carry upon his shoulders; which condition hath challenged unto them the foresaid name. Besides the qualities which we have already recounted, this kind of Dogs hath this principal property ingrafted in them, that they love their Masters liberally, and hate strangers despitefully; whereupon it followeth that they are to their Masters in travelling a singular safeguard, defending them forcibly from the invasion of villains and Theeves, preserving their lives from losse, and their health from hazzard, their flesh from hacking and hewing, with such like desperate dangers. For which consideration they are meritoriously termed,

In *Latin*, *Cani defensores*; *Defending Dogs* in our mother tongue.

If it chance that the Master be oppressed, either by a multitude, or by the greater violence, and so be beaten down that he lie groveling on the ground, (it is proved true by experience) that this Dog forsaketh not his Master, nor not when he is stark dead: But enduring the force of famishment and the outrageous tempests of the weather, most vigilantly watcheth and carefully keepeth the dead carcase many dayes, endeavouring furthermore, to kill the murderer of his Master, if he may get any advantage. Or else by barking, by howling, by furious jarring, snarling, and such like means betrayeth the malefactor as desirous to have the death of his aforesaid Master rigorously revenged. An example hereof fortuned within the City of *London* directly to the Town of *Kingshew* (most famous and renowned by reason of the triumphant coronation of eight several Kings) passing over a good portion of his journey, was assaulted and set upon by certain confederate Theeves lying in wait for the spoil in *Come-packs*, a perillous bottom, compassed about with Woods too well known for the manifold robberies and mischievous robberies there committed. Into whose hands this passenger chanced to fall, so that his ill luck cost him the price of his life.

And that Dog whose sire was *English*, (which *Blonde* registeth to have been within the banks of his remembrance) manifestly perceiving that his Master was murdered (this chanced not far from *Paris*) by the hands of one which was a suitor to the same woman, whom he was a wooer unto, did both bewray the bloody Butcher, and attempted to tear out the villains throat, if he had not sought means to avoid the revenging rage of the Dog. In fires also which fortune in the silence and dead time of the night, or in stormy weather of the said season, the older Dogs bark, howl, and yell, (yea notwithstanding they be roughly rated) neither will they stay their tongues till the household servants awake, rise, search, and see the burning of the fire, which being perceived they use voluntary silence, and cease from yelping. This hath been, and is found true by triall, in sundry parts of *England*.

There was no fainting faith in that Dog, which when his Master by a mischance in hunting stumbled and fell, toppling down a deep ditch being unable to recover of himself, the Dog signifying his Masters mishap, rescue came, and he was haled up by a rope, whom the Dog seeing almost drawn up to the edge of the ditch, cheerfully saluted, leaping and skipping upon his Master as though he would have embraced him, being glad of his presence, whose longer absence he was loath to lack. Some Dogs there be, which will not suffer fiery coles to lie scattered about the hearth, but with their paws will rake up the burning coles, musing and studying first with themselves how it might conveniently be done. And if so be that the coles cast too great a heat, then will they bury them in ashes and to remove them forward to a fit place with their noses. Other Dogs be there which execute the office of a Farmer in the night time. For when his Master goeth to bed to take his natural sleep; And when,

*A hundred bars of brasse and iron bolts,  
Make all things safe from tharts and from revols;  
When Janus keeps the gate with Argus eye,  
That danger none approach, no mischief nie,*

As *Virgil* vaunteth in his Verses: Then if his Master biddeth him goe abroad, he lingereth not, but rangeth

rangeth over all his lands thereabout, more diligently, I wyes, then any Farmer himself. And if he finde any thing there that is strange and pertaining to other persons besides his Master, whether it be man, woman, or beast, he driveth them out of the ground, not meddling with any thing that do belong to the possession and use of his Master. But how much faithfulness, so much diversity there is in their natures.

For there be some, which bark only with free and open throat, but will not bite, some which do both bark and bite, and some which bite bitterly before they bark.

The first are not greatly to be feared, because they themselves are fearful, and fearful Dogs (as the Proverb importeth) bark most vehemently.

The second are dangerous, it is wisdom to take heed of them, because they found as it were, an Alarm of an afterclap, and these Dogs must not be over much moved or provoked, for then they take on outrageously, as if they were mad, watching to set the print of their teeth in the flesh. And these kinde of Dogs are fierce and eager by nature.

The third are deadly, for they fly upon a man without utterance of voyce, snatch at him, and catch him by the throat, and most cruelly bite out collops of flesh. Fear these kinde of Curs, (if thou be wife and circumspect about thine own safety) for they be stout and stubborn Dogs, and set upon a man at a suddain unawares. By these signes and tokens, by these notes and arguments our men discern the towardy Cur from the courageous Dog, the bold from the fearful, the butcherly from the gentle and tractable. Moreover they conjecture, that a Whelp of an ill kinde is not worth keeping and that no Dog can serve the sundry uses of men so aptly and conveniently as this sort, of whom we have so largely written already. For if any be disposed to draw the above named *Services* into a Table, what man more clearly, and with more vehemency of voyces giveth warning either of a watchful Beast, or of a spoiling thief then this? who by his barking (as good as a burning Beacon) foreteweth hazards at hand. What manner of Beast stronger? What servant to his Master more loving? What companion more trusty? What Watchman more vigilant? What revenger more constant? What Messenger more speedy? What Water-bearer more painful? Finally, what Pack-horse more patient? And thus much concerning *English* Dogs, sick of the gentle kinde, secondly of the courser kinde. Now it remaineth that we deliver unto you the Dogs of a Mungrel or Curriish kinde, and then will we perform our task.

Containing *CURS* of the Mungrel and Rasal sort, and first of all the *DOG* called in *Latine*, *Admonitor*, and of us in *English*, *Wuppe*, or *Warner*.

OF such Dogs as keep not their kinde, of such as are mingled out of sundry sorts, not imitating the conditions of some one certain spise, because they resemble no notable shape, nor exercise any worthy property of the true, perfect and gentable kinde, it is not necessary, that I write any more of them, but to barish them as unprofitable implemets, out of the bounds of my Book; unprofitable I say, for any use that is commendable, except to entertain strangers with barking in the day time, giving warning to them of the House, that such and such be newly come, whereupon we call them admonishing Dogs, because in that point they perform their Office.

Of the *DOG* called *TURNESPIIT*, in *Latine*, *Turnospiro*.

HERE is comprehended, under the *CURS* of the courser kinde, a certain Dog in Kitchen-service excellent. For when any meat is to be roasted, they go into a wheel, which they turning round about with the weight of their bodies, so diligently look to their business, that no drudge nor scullion can do the feat more cunningly. Whom the popular sort hereupon call Turn-spits, being the last of all those which we have first mentioned.

Of the *DOG* called the *DANCER*, in *Latine*, *Saltator* or *Tympanista*.

HERE be also Dogs among us of a Mungrel kinde, which are taught and exercised to dance in measure at the Musical sound of an instrument, as at the just stroke of the Drum; at the sweet accent of the Cittern, and tuned strings of the harmonious Harp, shewing many pretty tricks by the gesture of their bodies, as to stand bolt upright, to lye flat upon the ground, to turn round as a ring, holding their tails in their teeth, to beg for their meat, and sundry such properties, which they learn of their Vagabundial Masters, whose instrument they are to gather gain withall in the City, Countrey, Town, and Village. As some which carry old Aps on their shoulders in coloured jackets to move men to laughter for a little lucre.

Of other *DOGS*, a short conclusion, wonderfully ingendred within the coast of this Country.

Of these there be three sorts; the first bred of a Bitch and a Wolf, called in *Latine*, *Lyciscus*; the second of a Bitch and a Fox, in *Latine*, *Lacena*; the third of a Bear and a Bandog, *Vraemus*. Of the first we have none naturally bred within the borders of *England*. The reason is for the want of Wolves, without whom no such Dog can be ingendred. Again, it is delivered unto thee in this discourse: how and by what means, by whose benefit, and within what circuit of time, this Country was clearly discharged of ravening Wolves, and none at all left, no, not the least number, or to the beginning of a number, which is an *Unarite*.

Of the second sort we are not utterly void of some, because this our *English* soil is not free from Foxes, (for indeed we are not without a multitude of them, inasmuch as divers keep, foster and feed them in their houses among their Hounds and Dogs, either for some malady of minde, or for some sickness of body) which peradventure the favour of that subtil Beast would either mitigate or expell.

The third which is bred of a Bear and a Bandog, we want not here in *England*, (A strange and wonderful effect, that cruel enemies should enter into the work of copulation, and bring forth so savage a Cur.) Undoubtedly it is even so as we have reported, for the fiery heat of their flesh, or rather the pricking thorn; or most of all, the tickling lust of lechery, beareth such sway and sway in them, that there is no contrariety for the time, but of constraint they must joya to engender. And why should not this be consonant to truth? why should not these Beasts breed in this land, as well as in other foreign Nations? For we read that Tygers and Dogs in *Hircania*, that Lyons and Dogs as in *Aracada*, and that Wolves and Dogs in *Francia* couple and procreate. In men and women also fightened with the Lantern of reason (but utterly void of vertue) that foolish, frantick, and fleshy action (yet naturally feated in us) worketh so effectually, that many times it doth reconcile enemies, set foes at friendship, unanimity, and atonement, as *Maria* mentioneth. The *Urcine* which is bred of a Bear and a Dog,

*Is fierce, is fell, is stout and strong,  
And biteth sore, to flesh and bone.  
His furious force indureth long,  
In rage he will be ruld of none.*

That I may use the words of the Poet *Gratius*. This Dog exceedeth all other in cruel conditions, his leering and fleering looks, his stern and savage visage, maketh him in fight fearful and terrible. He is violent in fighting, and wherefore he let his tenterhook teeth, he taketh such sure and fast hold, that a man may sooner tear and rend him asunder, then looke him and separate his chaps. He pisseth not for the Wolf, the Bear, the Lyon, nor the Bull, and may worthily (as I think) be companion with *Alexanders* Dog which came out of *India*. But of these, thus much, and thus far may seem sufficient.

A start to *Out-landish DOGS* in this conclusion, not impertinent to the Authors purpose.

Use and custome hath entertained others Dogs of an *Out-landish* kinde, but a few and the same being of a pretty bignesse, I mean *Island* Dogs, curled and rough all over, which by reason of the length of their hair make shew neither of face nor of body: And yet these Curs, forsooth, because they are so strange, are greatly let by esteeme, taken up, and many times in the room of the *Spaniel* gentle or comforter. The nature of men is so moved, nay, rather mared to novelties without all reason, wit, judgement or perseverance, *Eremon allotriat, pareromen suggestit*.

*Out-landish toys we take with delight,  
Things of our own Nation we have in despite.*

Which fault remaineth not in us concerning Dogs only, but for Artificers also. And why? it is manifest that we disdain and contemn our own Work-men, be they never so skilful, be they never so cunning, be they never so excellent. A beggerly Beast brought out of barbarous borders, from the uttermost Countreys Northward, &c. we stare at, we gaze at, we marvel at, like an *Asi* of *Canaan*, like *Tubal* with the brazen shanks, like the man in the Moon.

The which default *Hippocrates* marked when he was alive, as evidently appeareth in the beginning of his Book *Peri Agnui*, so entitled and named:

And we in our work entituled *De Ephepera Britannica*, to the people of *England* have more plentifully expressed. In this kinde look which is most blockish, and yet most waspish, the same is most esteemed, and not among Citizens only and jolly Gentlemen, but among lusty Lords also, and Noble.

Noblemen. Further I am not to wade in the foord of this discourse, because it was my purpose to satisfie your expectation with a short treatise (most learned *Comrade*) not wearisome for me to write, nor tedious for you to peruse. Among other things which you have received at my hands heretofore, I remember that I wrote a several description of the *Cetubian* Dog, because there are but a few of them, and therefore very seldom seen. As touching Dogs of other kinds you your self have taken earnest pain in writing of them both lively, learnedly, and largely. But because we have drawn this libell more at length then the former which I sent you (and yet briefer then the nature of the thing might well bear) regarding your most earnest and necessary studies; I will conclude, making a rehearsal notwithstanding (for memory sake) of certain specialties contained in the whole body of this my breviary. And because you participate principal pleasure in the knowledge of the common and usual names of Dogs (as I gather by the course of your letters) I suppose it not 'amiss to deliver unto you a short table containing as well the *Latine* as the *English* names, and to render a reason of every particular appellation, to the intent that no scruple may remain in this point, but that every thing may be sifted to the bare bottom.

A Supplement or Addition, containing a demonstration of *DOGS* Names how they had their Original.

The names contained in the general Table, forsooth as they signify nothing to you being a stranger, and ignorant of the *English* tongue, except they be interpreted: as we have given a reason before of the *Latine* words, so mean we to do no less of the *English*, that every thing may be manifest unto your understanding. Wherein I intend to observe the same order which I have followed before.

*Sagex*, in *English*, *Hund*, is derived of our *English* word hunt. One letter changed in another, namely T into D, as Hunt, Hund, whom if you conjecture to be so named of your Country word Hund; which signifieth the general name (*Dog*) because of the similitude and likeness of the words; I will not stand in contradiction (friend *Gesner*) for so much as we retain among us at this day many *Dutch* words, which the *Saxons* left at such time as they enjoyed this Country of *Britain*. Thus much also understand, that as in your language *Hand* is the common word, so in our natural tongue (*Dog*) is the universal, but *Hund* is particular and a special, for it signifieth such a Dog only as serveth to hunt, and therefore it is called a *Hund*.

Of the Gafe-hound.

The Gafe-hound called in *Latine*, *Agasem*, hath his name of the sharpness and steadfastness of his eye-sight. By which vertue he compasseth that which otherwise he cannot by smelling attain. As we have made former relation, for to gafe is earnestly to view and behold, from whence floweth the derivation of this *Dogs* name.

Of the Gray-hound.

The Gray-hound called *Leporarius*, hath his name of this word *Gre*, which word soundeth, *Gras* in *Latine*, in *English*, *Degree*. Because among all Dogs these are the most principal, having the chieft place, and being simply and absolutely the best of the gentle kinde of Hounds.

Of the Leywyer or the Lyemmer.

This Dog is called a *Leywyer*, for his lightness, which in *Latine* soundeth *Levitas*. Or a *Lyemmer*, which word is borrowed of *Lyemme*, which the *Latinists* name *Lorum*: and wherefore we call him a *Leywyer* of this word *Levitas*: (as we do many things besides) why we derive and draw a thousand of our terms out of the *Greek*, the *Latine*, the *Italian*, the *Dutch*, the *French*, and the *Spanish* tongue; (Out of which Fountains indeed, they had their Original issue.) How many words are buried in the grave of forgetfulness; grown out of use; wretched away; and perversely corrupted by divers defaults; we will declare at large in our Book entituled, *Symphonia vocum Britannicarum*.

Of the Tumbler.

Among Hounds the Tumbler called in *Latine*, *Versagus*; which cometh of this word *Tumbler*, flowing first from the *French* Fountain. For as we say *Tumble*, so they *Tumbler*, reserving our sense and signification, which the *Latinists* comprehend under this word *Vertere*. So that we see thus much, that *Tumbler* cometh of *Tumbler*, the Vowel I, changed into the Liquid L, after the manner of our speech. Contrary to the *French* and the *Italian* tongue: In which two Languages a Liquid before a Vowel for the most part is turned into another Vowel; as may be perceived in the example of these three two words, *Impbre & plano*, for *Impiere & piano*, L before E, changed into I, and L before A, turned into I also. This I thought convenient for a tale.

After such as serve for hunting, orderly do follow such as serve for hawking and fowling, among which the principal and chieft is the *Spaniel*, called in *Latine*, *Hippanisus*, borrowing his name of *Hispnia*, wherein we *English* men not pronouncing the Aspiration H, nor the Vowel I, for quickness and readines of speech, say roundly a *Spaguel*.

Of the Setter.

The second sort is called a Setter, in *Latine*, *Index*. Of the word (*Set*) which signifieth in *Engl.* *hys* that which the *Latins* mean by this word *Locum designare*, the reason is rehearsed before more largely, it shall not therefore need to make a new repetition.

Of the Water Spaniel or Finder.

The Water Spaniel consequently followeth, called in *Latine*, *Aquaticus*; in *Engl.* a Water Spaniel, which name is compound of two simple words, namely Water, which in *Latine* soundeth *Aqua*, wherein he swimmeth, and *Spani*, *Hispania*, the Countrey from whence they came; not that *England* wanteth such kinde of Dogs, (for they are naturally bred and ingendered in this Countrey) but because they bear the general and common name of these Dogs since the time they were first brought over out of *Spain*. And we make a certain difference in this sort of Dogs, either for something which in their qualities is to be considered, as for an example in this kinde called the Spaniel, by the apposition and putting to of this word Water, which two coupled together sound Water Spaniel. He is called a Finder, in *Latine*, *Inquisitor*; because that by serious and secure seeking, he findeth such things as be lost, which word *Finde* in *Engl.* is that which the *Latins* mean by this Verb *Invenire*. This Dog hath this name of his property, because the principal point of his service consisteth in the premises.

Now leaving the furview of hunting and hawking Dogs, it remaineth that we run over the refidue, whereof some be called fine Dogs, some coarse, other some Mungrels or Rascals. The first is Spaniel gentle called *Canis Meliour*, because it is a kinde of Dog accepted among Gentils, Nobles, Lords, Ladies, &c. who make much of them, vouchsafing to admit them so far into their company, that they will not only lull them in their laps, but kiss them with their lips, and make them their pretty play-fellows. Such a one was *Gorgius* little puppy mentioned by *Theocritus* in *Syracus*, who taking his journey, straightly charged and commanded his Maid to see to his Dog as charily and warily as to his child: To call him in always that he wandered not abroad, as well as to rock the babe a sleep, crying in the Cradle.

This Puppety and pleasant Cur, (which some frumpingly tearm Fyfling Hound) serves in a manner to no good use, except (as we have made former relation) to succour and strengthen qualing and quailing stomachs, to bewray bawdry, and filthy abominable lewdness (which a little Dog of this kinde did in *Sicilia*) as *Elanus* in his 7. Book of Beasts, and 27. chapter recordeth.

Of Dogs under the courser kinde, we will deal first with the Shepherds Dog, whom we call the Bandog, the Tydog, or the Maltive, the first name is imputed to him for service, *Quoniam pastori famulatur*, because he is at the Shepherds his Masters commandment. The second a *Ligament* of the band or chain wherewith he is tyed. The third a *Sagina*, of the fatness of his body.

For this kinde of Dog which is usually tyed, is mighty, grofs, and fat fed. I know this that *Augustinus Niphus* calleth this *Mastinus*, (which we call *Mastivus*) and that *Albertus* writeth how the *Lycistinus* is ingendered by a Bear and a Wolf. Notwithstanding the self same Author taketh it for the most part *pro Molosso*, a Dog of such a Countrey.

Of Mungrels and Rascals somewhat is to be spoken: and among these, of the Wappe of Turnspit, which name is made of two simple words, that is, of Turn, which in *Latine* soundeth *Vertere*, and of Spitt which is *Verru*, or *spede*, for the *Engl.* word inclineth closer to the *Italian* imitation *Verroussur*, Turnspit. He is called also Wappe, of the natural noise of his voyce Wau, which he maketh in barking. But for the better and readier sound, the vowel U, is changed into the consonant P, so that for Wappe we say Wappe. And yet I wot well that *Nomius* borroweth his *Babbari* of the natural voyce Bau, as as the *Gracians* do their *Bauten* of Wau.

Now when you understand this, that *Salare* in *Latine* signifieth *Dansare* in *Engl.* And that our Dog is thereupon called a Dancer, and in the *Latine*, *Salator*; you are so far taught as you were desirous to learn: and now I suppose, there remaineth nothing, but that your request is fully accomplished.

Thus (Friend *Gesser*) you have, not only the Kindes of our Countrey Dogs, but their names also, as well in *Latine* as in *Engl.*, their Offices, Services, Diversities, Natures, and Properties, that you can demand no more of me in this matter. And albeit I have not satisfied your minde peradventure (who suspecteth all speed in the performance of your request employed, to be meer delays) because I laid the ferring forth of that unperfected pamphlet, which five years ago I sent to you as a private friend for your own reading, and not to be printed and so made common, yet I hope (having like the Bear licked over my young) I have waded over in this work to your contentation, which delay hath made somewhat better, and *Deuterai phronides*, after wit more meet to be persued.

Now it is convenient to shut up this treatise of Dogs, with a recital of their several diseases and cures thereof; for as all other creatures, so this beast is annoyed with many infirmities. First, therefore if you give unto a Dog every seventh day, or twice in seven days breath or portage, wherein in Ivy is lod, it will preserve him found without any other medicine, for this herb hath the same operation in Dogs to make wholesome their meat, that it hath in Sheep to cleanse their pasture. The small fruits of Elebor which are like to Onions, have power in them to purge the belly of Dogs; Other give them Goats-milk, or Salt beaten small, or Sea-crabs beaten small and put into water, or

Staves.

Staves-acre, and immediately after his purgation, sweet Milk. If your Dog be obtructed and stop-ped in the belly, which may be discerned by his trembling, sighing, and removing from place to place, give unto him Oaten meal and water to eat, mingled together and made as thick as a Pulteis, or leavened Oaten bread, and sometime a little Whay to drink.

The Ancients have observed that Dogs are most annoyed with three diseases, the swelling of the throat, the Gowt, and madness; but the later Writers have observed many noysome infirmities in them. First, they are oftentimes wounded by the teeth of each other, and also of wilde Beasts: for cure whereof, *Blindus* out of *Maximus* writeth these remedies following: First, let the sinews, *phres*, or grilles of the wound be laid together, then sow up the lips or upper skin of the wound with a needle and thred, and take of the hairs of the Dog which made the wound, and lay thereupon, untill the bleeding be stanchd, and so leave it to the Dog to be licked; for nature hath so framed the Dogs tongue, that thereby in short space he cureth deep wounds.

And if he cannot touch the fore with his tongue, then doth he wet his foot in his mouth, and so oftentimes put it upon the main: or if neither of these can be performed by the Beast himself, then cure it by calting upon it the ashes of a Dogs head, or burned salt, mingled with liquid pitch poured thereupon. When a Dog returning from hunting is hurt about the snout, by the venomous teeth of some wilde Beast, I have seen it cured by making incision about the wound, whereby the poysoned blood is evacuated, and afterward the fore was anoynted with Oyl of Saint Johns-wort. Wood-worms cure a Dog bitten by Serpents. When he is troubled with Ulcers or rindes in his skin, pieces of Pot-theards beaten to powder and mingled with Vinegar and Turpentine, with the fat of a Goose, or else Water-wort with new Lard, applyed to the fore, ease the same: and if it swell, anoynt it with Butter.

For the drawing forth of a thorn or splinter out of a Dogs foot, take Colts-foot and Lard, or the powder thereof burned in a new earthen pot; and either of these be performed by the Beast himself, then cure the Thorn, and cureth the fore: for by *Disforides* it is said, to have force to extract any point of a Spear out of the body of a man. For the Worms which breed in the Ulcers of their heels, take *Vingenum Egyptianum*, and the juyce of peach-leaves: There are some very skilful Hunters which affirm, that if you hang about the Dogs neck flicks of Citrine, as the wood dryeth, so will the Worms come forth and dy. Again, for this evil they wash the wounds with water, then rub it with Pitch, Thyme, and the dung of an Oxe in Vinegar: afterward they apply unto it the powder of Elebor. When a Dog is troubled with the Mangie, Itch, or Ring-worms, first let him blood in his forelegs in the greatest vein: afterward make an Ointment of Quick-silver, Brimstone, Nettle-seed, and twice so much old Sewet or Butter, and therewithall anoint him, putting thereunto if you please decoction of Hops and Salt water.

Some do wash Mangy Dogs in the Sea-water; and there is a Cave in *Sicily* (saith *Gratius*) that hath this force against the scabs of Dogs, if they be brought thither, and set in the running water which seemeth to be as thick as Oyl. Flegm or melancholy doth often engender these evils, and so after one Dog is infected, all the residue that accompany or lodge with him, are likewise poysoned: for the avoiding thereof, you must give them Fumitory, Sorrel, and Whay lod together; it is good also to wash them in the Sea, or in Smiths-water, or in the decoction aforesaid.

For the taking away of Warts from the feet of Dogs, or other members, first rub and scriccase the Wart violently, and afterward anoint it with Salt, Oyl, Vinegar, and the powder of the rinde of a Gourd; or else lay unto it Aloes beaten with Multard-seed, to eat it off, and afterward lay unto it the little scories or iron chips, which fly off from the Smiths hot iron while he beatech it, mingled with Vinegar, and it shall perfectly remove them.

Against Ticks, Lyce, and Fleas anoint the Dogs with bitter Almonds, Staves-acre, or roots of Maple, or Cypers, or froth of Oyl, if it be old; and anoint also their ears with Salt-water, and bitter Almonds, then shall not the flies in the Summer time enter into them. If Bees or Wasps, or such Beasts sting a Dog, lay to the fore burned Rue, with Water; and if a greater Fly, as the Horner, let the Water be warmed. A Dog shall be never infected with the Plague, if you put into his mouth in the time of any common Pestilence, the powder of a Storks craw, or Ventricle, or any part thereof with Water: which thing ought to be regarded, (for no creature is so soon infected with the Plague as is a Dog and a Mule) and therefore they must either at the beginning receive medicine, or else be removed out of the air, according to the advice of *Gratius*:

*Sed variis virus, nec in omnibus una pestis;  
Disce vices, & qua tutela est proxima, tentis.*

Pliny.

Wolf-wort, and *Apocynon*, whose leaves are like the leaves of Ivie, and smell strongly, will kill all Beasts which are littered blinde; as Wolves, Foxes, Bears, and Dogs, if they eat thereof: So likewise will the root of *Chamaeleon* and *Mezerion*, in Water and Oyl, it killeth Mice, Swine, and Dogs. Elebor, and *Squilla*, and *Faba Lupina*, have the same operation. There is a Gourd (called *Zinziber* of the Water) because the taste thereof is like to Ginger, the Flower, Fruit, and Leaf thereof killeth Asps, Mules, Dogs, and many other four-footed Beasts. The Nuts *Pomice*, are poyson to Dogs, except their ear be cut presently and made to bleed. It will cause them to leap strangely up and down, and kill him within two hours after the tasting, if it be not prevented by the former remedy. *Theophrastus Chrysippus* affirmeth; that the water wherein Sperage hath been

Discretus.

Of the diseases of Dogs and their cures. *Blindus.**Pliny. Tardius.*











Grandia taurorum portant qui corpora, quævis  
An Lybicas possint sustinuisse trabes.

*Variomama* also faith, that he saw in the Isle of *Sumatra*, two Elephants teeth, which weighed three hundred fix and thirty pounds. This is certain, that the teeth of those Elephants which live in the Marishes and watry places, are so smooth and hard, as they seem intractable, and in some places they have holes in them, and again certain bunches as big as hail-stones, which are so hard, as no art or instrument can work upon them.

**Philostatus.**

The Elephants of the Mountains have lesser and whiter teeth, fit to be applied to any work, but the belt of all, are the teeth of the *Campesiri* and field Elephants, which are whiflet and softest, and may well be handled without all pain. The teeth of the female are more pretious then of the male, and these they lose every tenth year; which falling off, they bury and cover in the earth, pressing them down by sitting upon them, and then heal them over with earth by their feet, and so in short time the grass groweth upon them; for, as when they are hunted they know it is for no other cause then their teeth; so also when they lose their teeth, they desire to keep them from men, lest the virtues of them being discovered, they which bear them should enjoy the lesse peace and security.

**The finding of hidden teeth.**

*Ælianus.*

**A wonderful  
natural secret.**

It is admirable what devils the people of *India* and *Africa* have invented by natural observation, to find out these buried teeth, which unto us living in the remote parts of the world, we would judge impossible by any ordinary or lawful course, except we should turn up the earth of a whole Country, or go to work by diabolical conjuration; yet have they found out this facile and ready course. In the woods or fields where they suspect these teeth to be buried, they bring forth pots or bottles of water, and disperse them here, one there another, and so let them stand, and carry to watch them, so one sleepeth, another fingeeth, or bestoweth his time as he pleaseth; after a little time, they go and look in their pots, and if the teeth lie near their bottles, by an unpeakeable and secret attractive power in nature, they draw all the water out of them that are near them, which the watchman taketh for a sure sign, and so diggeth about his bottle, till he finde the tooth: but if their bottles be not emptied, they remove to seek in another place.

bottles be not emptied, they remove to seek in another place.

These Ivory teeth have been a way of great estimation among all the Nations that ever knew them, the Ethiopians payed for a tribute unto the King of *Perfia* every third year twenty of these teeth hung about with gold and Jet-wood. These are sold by weight, and there be many which deceive the world with the bones of Fishes in stead hereof, but the true Ivory is paler and heavier, and falling upon the ground will easily break, whereas the bones of Fishes are more tenacious, light and strong. It is like to the *Chernites* wherein *Darius* was entombed, and the Marble called *Lapis Cordalite*, Coral stone: like unto this is the *Alagi* stone, and the *Pedrets* Jewell. When this Ivory they made images and statues for their Idol gods, as one for *Pallas* in *Athens*, for *Esculapin* in *Epaurum*, for *Venus* under the name of *Uranis* by *Phidias*, whereupon she was called *Elephantina*, in *Epaurum*, for *Apollu* at *Rome*: and therefore *Pausanias* wondereth at the *Greeks* that spared no cost for the vain worship of their gods, for they brought of the *Indians* and *Ethiopian* Ivory to make their Images with more pomp and ostentation: besides Ivory they make the hafts of knives, and also the best combs, and *Solomon* as appeareth 3 Reg. 10. had a throne of Ivory covered all over with gold, for the costs and charge whereof he could not expence lesse then thirty thousand talents.

**Rob. Cenalis**

**Pliny.**  
Whether Ele-  
phants have  
horns.

The greatne of these appeareth by their use, for *Polybius* reporteth by the *Apellani* of *Gallia* Noble man and a great traveller in *Africa*, that with them they made polts for houles, and racks to lay their Cattels mead upon, and likewise folds to enclose them. *Apellani* made an Inke of Ivory, which was called Elephants inke, and he painted therewith. It hath been affirmed by *Aelianus* and some writers following *Pliny*, that these teeth are horns, and that Elephants are horned beasts, which error rose upon the occasion of these words of *Pliny*; *Elephantus & arietes cadunt tantum cornibus affinitatis, in Samentum litore reciprocorum desinit Oceanus*: where *Aelianus* finding a resemblance betwixt Rams and Elephants in their white horns, was contented to apply that name to them both, which appertaineth only to one; for *Pliny* himself lib. 18. sheweth his meaning by another like speech, of their whetting their horns upon trees, and *Rhinoceros* upon stones: for except he had named horns in the first place it might have been questioned whether *Rhinoceros* had any horns, but rather teeth in the second place.

But whatsoever were the words or opinion of *Pliny*, it is most certain, that after *Herodotus* and other ancient writers, it is safer to call these teeth then horns, and I will briefly set down the reasons

reasons of *Philoftratus*, that will have them to be teeth; and afterward of *Grapaldus*, *Eliañus*, and *Paulianus*, that would make them horns, and so leave the Reader to consider whether opinion he thinketh most agreeable to truth. First, that they are not horns, it is alleged that horns fall off and grow every year again, especially of Harts, and grow forth of their heads; but teeth which are called *Fanne* or *Gang-teeth*, standing out of the mouth, fall off together, and are given for weapon and defence to beaſts, and ſuch are Elephants. Again, a horn hath a certain line or circle neer the root, which is covered every year, but this cometh up like a ſtony ſubſtance, without all circle or cover, and therefore it cannot be a horn. Moreover, thoſe creatures are ſaid to have horns that have cloven hoofs, this hath no cloven hoof, but only five diſtinct fingers upon a foot. Laſtly, all horned beaſts have an empty hollowneſs in their horns (except Harts) but this is found and full throughout, except a little paſſage in the middle like a hole into a tooth: and thus ſay they which will have them called teeth.

Now on the contrary, those which will have them horns, make these arguments. First, as the Elks have their horns grow out of their eye-lids, the *Rhinoceroses* or *Elbiphan* Buls out of their nose, so as it is not unnatural for the Elephant to have his horns grow out of his mouth. Again, horns fall off and come again in old beasts, but teeth do not so, and therefore these are horns and not teeth; the power of fire cannot alter teeth, but these teeth break if you go about to change their proportion or figure, but horns of Oxen and Elephants may be stretched, bended, altered, straightened, and applied to what fashion soever you will. Again, teeth grow out of the gums and check-bones as it is apparent, but horns grow out of the skull and temples, and so do the Elephants, as by observation every man may discern. Lastly, as nature hath given another shape and greater proportion of body to Elephants then to any other beasts, so also it is not unreasonable that it vary in the placing of his horns, for they grow downward, and the very mole and quantity of his body is sufficient to arme him against the fear of death. Thus they argue for the horns of Elephants.

The Poets have a pretty resemblance of dreams, comparing true dreams to horns, and false dreams to Ivory, because falshood is ever more burnished, then naked and ragged truth. And besides the eye of man is translucent, and containeth in it a horny substance, and by the eye we always receive the best assurance, but by the mouth (signified by teeth) are many falshoods vented: and for that horns turn upward to heaven, the fountain of truth, but the teeth of an Elephant grow downward towards the earth the mother of error. And for this cause *Aeneas* by *Virgil* and *Homer*, is said to come in at the horny gate of *Somnus*, and to go forth at the Ivory: *Virgil's* Verses are these:

*Sunt gemine Somni portæ, quarum altera fertur  
Cornu, qua veris facilis datur exitus umbris.  
Altera candenti perfectâ nitens Elephantio,  
Sed falsa ad cælum mittunt insomnia manus.  
His ubi dum natum Anchises, unaque Sibyllam  
Prosequitur diâs, portaque emittit eburna.*

And here we will leave, and prosecute no further this discourse of their horns and teeth, but proceed to the other outward parts of this beast.

The tongue is very small though broad, his trunck called *Proboscis* and *Promucis*, is a large hollow thing hanging from his nose like skin to the groundward; and when he feedeth it lyeth open, like the skin upon the bill of a Turkey-cock, to draw in both his meat and drink, using it for a hand, and therefore improperly it is called a hand. For by it he receiveth of his keeper whatsoever he giveth him, with it he overthroweth trees, and wheresoever he swimmeth, through it he draweth breath. It is crooked, griftly, and inflexible at the root next to the nose: within it hath two passages, one into the head and body by which he breatheth, and the other into his mouth, whereby he receiveth his meat: and herein is the work of God most wonderful, not only in giving unto it such a divers proportion and anatomy, but also giving him reason to know this benefit of it, that so long as he is in the water and holdeth up that trunck, he cannot perish.

With this he fighteth in war, and is able to take up a small piece of money from the earth : with it he hath been seen to pull down the top of a tree, which twenty four men with a rope could not make to bend. With it he driveth away his Hunters when he is chased, for he can draw up therein a great quantity of water, and shoot it forth again, to the amazement and overthrow of them that persecute him. The *Moors* say that he hath two hearts, one wherewithal he is incended, and another whereby he is pacified.

But the truth is, as *Aristotle* in the dissection of the heart observed, there is a double ventricle and bone in the heart of an Elephant. He hath a Liver without any apparent gall, but that fide of the Liver being cut, whereon the gall should lie, a certain humour cometh forth like a gall. Wherefore *Elizianus* faith, he hath his gall in his maw-gut, which is so full of sinews, that one would think he had four bellies; in this receiveth he his meat, having no other receptacle for it. His intrails are like unto a Swines, but much greater.

His Liver four times so great as an Oxes, and so all the residue except the Milt. He hath two pappes a litle beside his brest under his shoulders, and not between his hinder legs or loint, they are

Their love to  
sweet flowers.  
*Albanus.*

It will forbear drink eight dayes together, and drink wine to drunkenness like an Ape. It is delighted above measure with sweet savours, ointments, and smelling flowers, for which cause their keepers will in the Summer time lead them into the meadows of flowers, where they of themselves will by the quickness of their smelling, chuse out and gather the sweetest flowers, and put them into a basket if their keeper have any; which being filled, like daintie and neat men, they also desire to wash, and so will go and seek out water to wash themselves, and of their own accord return back again to the basket of flowers, which if they find not, they will bray and call for them. Afterward being led into their stable, they will not eat meat until they take of their flowers and dresse the brims of their mangers therewith, and likewise strew their room or standing place,

As they live in herds, so when they are to pass over a river or water, they send over the least or youngest first, because their great bodies together should not cause the deep water to swell or rise above their height: the other stand on the bank and observe how deep he wadeth, and so make account that the greater may with more assurance follow: after the younger and smaller, then they the elder and taller, and the females carry over their Calves upon their snows, and long eminent teeth binding them fast with their trunks, (like as with ropes or male girts, that they may not fall) being sometime holpen by the male; wherein appeareth an admirable point of natural wisdom, both in the carriage of their young, and in sending of the lesser foremost, not only for the reason aforesaid, but also because they being hunted and prosecuted, it is requisite that the greatest

Plutarch.  
Elianus.  
Philostrophus.



and strongest come in the rear and hindmost part, for the safeguard of the weaker, against the fury of their persecutors, being better able to fight then the foremost, whom in natural love and policy, they set farthest from the danger.

The bringing  
of Elephants  
out of Ships.

A secret, if  
true.

Aristotle.  
Of their fight-  
ing.

Gillius.  
Aelianus.  
Cassius.  
Zoroastres.  
Their fear of  
Rams, Swine,  
and other  
beasts.  
Volaterranus.

The cruelty of  
the females to  
their wounded  
Calves.  
Solinus.  
Stat. Sebest.

Elianus.

Of Cinnabaris  
or the best red  
colour.

The fight of  
Elephants.  
Pliny.

*Mitru* which had been thrice Consul affirmeth, that he saw Elephants brought on shore at *Puteoli* in Italy: they were caused to go out of the Ship backward, all along the bridge that was made for them, that to the sight of the Sea might terrifie them, and cause them more willingly to come on land, and that they might not be terrified with the length of the bridge from the continent. *Pliny* and *Solinus* affirm, that they will not go on shipboard, untill their keeper by some intelligible signe of oath, make promise unto them of their return back again.

They sometimes, as hath been said, fight one against another, and when the weaker is overcome, he is so much abased and cast down in minde, that ever after he feareth the voice of the conquerour.

They are never so fierce, violent, or wilde, but the sight of a Ram tameth and dismayeth them, for they fear his horns; for which cause the *Egyptians* picture an Elephant and a Ram, to signifye a foolish King that runneth away for a fearfull fight in the field. And not only a Ram, but also the grunting clamour or cry of Hogs: by which means the *Romans* overthrow the *Carthaginians* and *Pyrhus* which trusted overmuch to their Elephants: When *Antipater* besieged the *Megarians* very traitly with many Elephants, the Citizens took certain Swine and anointed them with pitch, then set them on fire and turned them out among the Elephants, who crying horribly by reason of the fire on their bodies, so distempred the Elephants, that all the wile of the *Macedonians* could not restrain them from madnesse, fury, and flying upon their own company, only because of the cry of the Swine. And to take away that fear from Elephants, they bring up with them when they are tamed, young Piggies and Swine ever since that time. When Elephants are chased in hunting, if the Lions see them, they run from them like Hinde-calves from the Dogs of Hunters, and yet *Iphicrates* sayeth, that among the *Hebrewians* or western *Ethiopians*, Lions set upon the young Calves of Elephants and wound them: but at the sight of the mothers, which come with speed to them, when they hear them cry, the Lions run away, and when the mothers finde their young ones imbrued in their own blood, they themselves are so enraged that they kill them, and so retire from them, after which time the Lions return and eat their flesh. They will not endure the favour of a Moufe, but refuse the meat which they have run over: in the river *Ganges* of *India*, there are blew Wormes of sixty cubits long having two armes; these when the Elephants come to drink in that river, take their trunks in their hands and pull them off. There are Dragons among the *Ethiopians*, which are thirty yards or paces long, these have no name among the inhabitants but Elephant-killers. And among the *Indians* also there is an inbred and native hateful hostility between Dragons and Elephants: for which cause the Dragons being not ignorant that the Elephants feed upon the fruits and leaves of green trees, do secretly convey themselves into them or to the tops of rocks: covering their hinder part with leaves, and letting his head and fore part hang down like a rope, on a suddain when the Elephant cometh to crop the top of the tree, he leapeth into his face, and diggeth out their eyes, and because that revenge of malice is too little to satisfie a Serpent, the twineth her gable like body about the throat of the amazed Elephant, and so strangleth him to death.

Again they marke the footsteps of the Elephant when he goeth to feed, and so with their tails, net in and entangle his legs and feet: when the Elephant perceiveth and feeleth them, he putteth down his trunk to remove and untie their knots and gins; then one of them thrusteth his poisoned stinging head into his Nostrils, and so stops up his breath, the other prick and gore his tender belly-parts. Some again meet him and sic upon his eyes and pull them forth, so that at the last he must yeeld to their rage, and fall down upon them, killing them in his death by his fall, whom he could not resist or overcome being alive: and this must be understood, that forso much as Elephants go together by flocks and herds, the subtil Dragons let the foremost passe, and set upon the hindmost, that so they may not be oppressed with multitude.

Also it is reported that the blood of an Elephant is the coldest blood in the world, and that Dragons in the scorching heat of Summer, cannot get any thing to cool them, except this blood; for which cause they hide themselves in rivers and brooks whither the Elephants come to drink, and when he putteth down his trunk they take hold thereof, and instantly in great numbers leap up unto his ear, which is naked, bare and without defence: whereout they suck the blood of the Elephant untill he fall down dead, and so they perish both together.

Of this blood cometh that ancient *Cinnabaris*, made by commixture of the blood of Elephants and Dragons both together, which alone is able, and nothing but it, to make the best representation of blood in painting. Some have corrupted it with Goats-blood, and call it *Milum*, and *Mimom*, and *Monocroma*: it hath a most rare and singular vertue against all poisons, beside the unmatchable property aforesaid.

These Serpents or Dragons are bred in *Taprobana*, in whose heads are many pretious stones, with such naturall feals or figurative impressions, as if they were framed by the hand of man, for *Podippus* and *Taxartes* affirm, that they have seen one of them taken out of a Dragons head, having upon it the lively and artificiall stamp of a Chariot.

Elephants are enemies to wilde Bulls, and the *Rhinoceros*, for in the games of *Pompey*, when an Elephant and a *Rhinoceros* were brought together, the *Rhinoceros* ran instantly and whet his horn upon a stone,

stone, and so prepared himself to fight, striking most of all at the belly of the Elephant, because he knew that it was the tenderest and most penetrable part of the body.

The *Rhinoceros* was as long as the Elephant, but the legs thereof were much shorter, and as the *Rhinoceros* sharpen their horns upon the stones, so do the Elephants their teeth upon trees: the sharpness of either yeeldeth not to any steel. Especially the *Rhinoceros* tearth and pricketh the legs of the Elephant. They fight in the woods for no other cause, but for the meat they live upon, but if the *Rhinoceros* get not the advantage of the Elephants belly, but set upon him in some other part of his body, he is loon put to the worst, by the sharpness of the Ivory tooth which pierceth through his more then buffe-hard skin (not to be pierced with any dart) with great facility, being set on with the strength of so able an adversary. The Tygre also feareth not an Elephant, but is fiercer and stronger, for he leapeth upon his head and tearth out his throat, but the Grypphins which overcome almost all beasts, are not able to stand with the Lions or Elephants.

The females are far more strong, chearful, and courageous then the males, and also they are apt to bear the greater burthens; but in War the male is more graceful and acceptable, because he is taller, giving more assured enignes of victory and fortitude: for their strength is admirable, as may be conjectured by that which is formerly recited of their trunk, as *Vartamanus* affirmeth, that he saw three Elephants with their only heads, drive a great Ship out of the Sea-water where it was fastened unto the shore. When he is most loaded, he goeth fureth, for he can carry a wooden Tower on his back with thirty men therein, and their sufficient food and warlike instruments.

The King of *India* was wont to go to war with 30000 Elephants of war, and beside these he had also followed him 3000 of the chieftest and strongest in *India*, which at his command would overthrow Trees, Houses, Walls, or any such thing standing against him: and indeed upon these were the *Indians* wont to fight, for the defence of their Coast and Countrey. The farthest region of that continent is called *Partalis*, inhabited by the *Gangarides* and *Galinge*, the King whereof was wont to have seven hundred Elephants to watch his Army, and there was no mean Prince in all *India* which was not Lord of many Elephants. The King of *Palibotra* kept in stipend, eight thousand every day, and beyond his Territory was the King of *Molabe* and *Molinde*, which had four hundred Elephants. These fight with men, and overthrow all that come within their reach, both with their trunks and teeth.

There were certain officers and guiders of these Elephants, which were called *Elephantarche*, who were the governors of sixteen Elephants, and they which did instruct and teach them Martial discipline, were called *Elephantagogi*. The Military Elephant did carry four persons on his back, one fighting on the right hand, another fighting on the left hand, a third which stood fighting backward from the Elephants head, and a fourth in the middle of these holding the reins and guiding the beast to the discretion of the Souldiers, even as the Pilot in a Ship guideth the Stern, wherein was required an equall knowledge and dexterity, for they understand any language quickly; for when the *Indian* which ruled them said, *Suzike* here on the right hand, or else on the left, or refrain and stand still, no reasonable man could yeeld ready obedience. They did fasten by iron chains, first of all upon the Elephant that was to bear ten, fifteen, twenty, or thirty men, on either side two panniers of iron bound underneath their belly, and upon them the like panniers of wood hollow, wherein they place their men at armes, and covered them over with small boards, for the trunk of the Elephant was covered with a mail for defence, and upon that a broad sword, and two cubits long: this (as also the wooden Cattle or panniers aforesaid) were fastened first to the neck, and then to the rump of the Elephant. Being thus armed, they entred the battel, and they shewed unto the beast to make them more fierce, wine, red liquor made of Rice, and white cloth, for at the sight of any of these, his courage and rage increaseth above all measure; then at the found of the Trumpet he beginneth with teeth to strike, tear, beat, spoil, take up into the air, cast down again, stamp upon men under feet, overthrow with his trunk, and make way for his riders to pierce with Spear, Shield, and Sword; so that his horrible voice, his wonderful body, his terrible force, his admirable skill, his ready and inclinable obedience, and his strange and seldom seen shape, produced Elephants againe the *Romans* in *Lucania*: afterward *Afrubal* in *Africa*, *Antiochus* in the East, and *Jugurtha* in *Numidia*.

Against this new kinds of Castle-fighting, and Souldier-bearing beasts, on the contrary they invented new kinds of stratagems, as is before set down, and also new instruments of war, for a *Cretian* in *Lucania* with a new devised sharp Sword cut off the trunk of this beast, againe other invented, that two armed Horses should draw a Chariot, and in the same armed men with Javelins and sharp Spears, the speedy Horses should with all force run upon the Elephants, and the spear-men directing their course and weapons, some upon the beast, other upon the riders, did not only wound the beast, but also by celerity of the Horses, escape all danger.

Other again sent against him armed Souldiers, having their Armour made full of sharp prickes or piercing piked Nails, so that when the beast did strike at them with his trunk, he received grievous wounds by his own blowes. Again there were certain young men Souldiers, armed with light armour, which being mounted upon swift Horses, could cast Darts with singular facility, and without the reach of the beast, many times wounding him with long Spears, and so by

*Aelianus*.  
*Oppianus*.  
*Strabo*.

*Enstatius*.

*Vartamanus*.  
The conditions  
& courage  
of male and  
female.  
*Gillius*.

*A'bertus*.  
The strength  
and burthen  
of an Elephant.

*Pliny*.  
The keepers  
& maine-  
ainers  
of Elephants.  
*Solinus*.

*Pollux*.  
The instru-  
ment of Ele-  
phants for war.  
*A'lianus*.

The fight  
against Ele-  
phants.





head is not a little disconcerted and terrified. So that being bereft of their wits, they turn back and run into the ditch which they so carefully avoided before.

But if their rage proceed undeterred, and men be forced to yield unto them, forth they go into the woods, making the trees to bend unto them as a Dog or an Ox doth the standing corn at harvest: breaking off their tops and branches, which hinder their course and flight; as another beast would crop off the ears of corn; but where they are taller than the woods, there they strain every joint and member in them to get ground; and overgo their Hunters; which they may perform and attain more easily, because of their customary abode in those places: and when they are escaped out of the fight of their followers, and make account that they are freed from further persecution, then cast they off all fear, and compound their distracted senses into a remembrance of meat, and so gather their food from Palms, Trees or bushes; afterward betaking themselves to rest and quietness.

But if their Hunters come again into their sight, they also again take them to their heels, until they have gotten more ground from them, and then they rest again; and if the Sun decline, and light of day fall the Hunters, and darkness make an end of the chase; then do they compass in the beasts way, and set the wood a fire; (for Elephants fear fire as much as Lions.) So that by all this it appeareth; that the fabulous tales of *Gabinus the Roman* writer of Elephants, are not to be believed, when he affirmeth, that Elephants will fight against and resist the violence of fire.

The *Troglodyte* hunt and take Elephants after another manner, for they climb up into the trees, and there sit till the flocks of Elephants pass by, and upon the last, the Watch-man suddenly leapeth (with great courage) taking hold upon his tail and so sliding down to his legs, and with a sharp Axe which he hath hanging at his back cutteth the nerves and sinews of his legs with so great celerity, that the beast cannot turn about to relieve it self, before he be wounded and made unable to revenge her harm, or prevent her taking: and sometimes she falleth down on the wounded side, and creeps the Hunter watch-man to death, or else with her force in running, dasheth out his brains against a tree.

Pliny.

Strabo.  
Other ways  
of taking Ele-  
phants.

The Elephants-hunters (called *Elephantophagi*) do observe the like policy, for by stealth and secretly they set upon the hindmost, or else the wandering solitary Elephant, and cut his sinews, which causeth the beast to fall down, whom presently they behead, and afterward they eat the hinder parts of this beast to cast down and taken.

Other among the aforesaid *Troglodytes*, use a more easie, cunning and lesse perilous kinde of taking Elephants: for they set on the ground very strong charged bent-bowes, which are kept by many of their strongest young men, and so when the flocks of Elephants pass by, they shoot their sharp arrows dipped in the gall of Serpents, and wound to some one of them, and follow him by the blood, until he be unable to make resistance. There are three at every bow, two which hold it, and one that draweth the string. Other again, watch the trees whereunto the beast leaseth when he sleepeth, near some waters, and the same they cut half asunder, whereunto when he declineth his body, the tree is overturned and the beast also, and being unable to rise again because of the short nerves and no flexions in his legs, there he lyeth till the Watch-man come and cut off his head.

*Aristotle* describeth another manner of taking Elephants in this sort; The Hunter (saith he) getteth up upon a tamed Elephant, and followeth the wilde one till he have overtaken it, then commandeth he the tame beast to strike the other, and so continueth chasing and beating him, till he have wearied him, and broken his untameable nature. Thence doth the rider leap upon the wearied and tyred Elephant, and with a sharp-pointed Sickle doth govern him after the tame one, and so in short space he groweth gentle. And some of them when the rider sleighteth from their backs, grow wilde and fierce again; for which cause they binde their forelegs with strong bands, and by this means they take both great and small, old and young ones; but as the old ones are more wilde and obstinate, and so difficult to be taken, so the younger keep so much with the elder, that a like impossibility or difficulty interposeth itself from apprehending them.

Gillius.

In the *Caspian* lake, there are certain fishes (called *Corymbus*) out of whom is made such a firme glue, that it will not be dissolved in ten dayes after it hath been taken hold; for which cause they use it in the taking of Elephants.

There are in the Island *Zela* many Elephants, whom they take on this manner: In the Mountain they make certain cloysters in the earth, having two great trees standing at the mouth of the cloysters, and in those trees they hang up a great partition gate, within that cloyster they place a tame female Elephant, at the time of their usual copulation: the wilde Elephants do specially wind her, and make to lye, and so at the last having found the way betwixt the two trees, enter into her, sometime twenty, and sometime thirty at a time: then are there two men in the said trees, who cut the rope, whereby the gate hangeth, so it fallth down and includeth the Elephants, where they suffer them alone for six or seven dayes without meat, whereby they are so infected and famished, that they are not able to stand upon their legs.

When two or three strong men enter in among them, and with great staves and clubs, beabout and scudgel them, till by that means they grow tame, and gentle; and although an Elephant be a monstrous great beast, and very subtil, yet by these and such like means do the inhabitants of *India* and *Arabia*, take many of them with a very small labour to their great advantage.

Against

Against these sleights of men, may be supposed the subtil and cautelous evasions of the beast, avoiding all the footsteps of men, if they smell them upon any herb or leaf, and for their fight with the Hunters, they observe this order. First of all, they set them foremost which have the least teeth, that so they may not be afraid of combat, and when they are weary, by breaking down of trees they escape and flee away. But for their hunting, they know that they are not hunted in *India* for no other cause, then for their teeth, and therefore to discourage the Hunters, they let them which have the worst teeth before, and reserve the strongest for the second encounter: for their wisdom or natural discretion is herein to be admired, that they will so dispose themselves in all their battails when they are in chase, that ever they fight by course, and inclose the youngest from perill, so that lying under the belly of their Dams they can scarce be seen: and when one of them flyeth they all flee away, to their usual resting places, striving which of them shall go foremost: And if at any time they come to a wide and deep Ditch, which they cannot passe over without a bridge, then one of them descendeth, and goeth down into the Ditch, and standeth transverse or crosse the same, by his great body filling up the empty parts, and the residue passe over upon his back as upon a bridge.

Afterward when they are all over, they carry and help their fellow out of the Ditch or Trench again, by this sleight or device, one of them putteth down to him his leg, and the other in the Ditch windeth his trunk about the same, the residue standers by cast in bundles of sprigs with self out of the Trench again, and departeth with his fellows.

But if they fall in and cannot finde any help or means to come forth, they lay aside their natural wilde disposition, and are contented to take meat and drink at the hands of men, whose presence before they abhorred; and being delivered they think no more upon their former condition, but in forgetfulness thereof, remain obedient to their deliverers.

Being thus taken, as it hath been said, it is also expedient to expresse by what art and means they are cured and tamed. First of all therefore when they are taken, they are fastened to some Tree or Pillar in the earth, so as they can neither kick backward nor leap forward, and there hunger, thirst, and famine, like to two most strong and forcible Riders abate their natural wildness, strength, fear and hatred of men: Afterward when their keepers perceive by their dejection of minde, that they begin to be mollified and altered, then they give unto them meat out of their hands, upon whom the beast doth cast a far more favorable and cheerful eye, considering their own bondage, and so at the last necessity frameth them unto a contented and tractable course and inclination.

But the *Indians* by great labour and industry take their young Calves at their watering places, and so lead them away, inciting them by many allurements of meat to love and obey them, so as they grow to understand the *Indian* language, but the elder *Indian* Elephants do very hardly and seldom grow tame, because of their remembrance of their former liberty, by any bands and oppression; nevertheless by instrumental musick, joyined with some of their Country songs and ditties, they abate their fierceness, and bring down their high untractable stomachs, so as without all bands they remain quiet, peaceable and obedient, taking their meat which is layed before them.

*Pliny* and *Solinus* prescribe the juyce of Barly to be given to them for their mitigation, whereunto also agreeth *Discorides* (calling that kind of drink *Zybu*) and the reason hereof is, because of the tart sharpness in Barly water if it stand a little while; and therefore also they prescribe Vinegar and ashes to rub the beasts mouth, for it hath power in it to pierce stones, all sharp things penetrate deep into his flesh, and alter his nature; the invention whereof is attributed to *Demetrius*.

Being thus tamed, they grow into civil and familiar uses, for *Cesar* ascended into the *Capital* four Waggon drawn with Elephants in *Vaticanium*, and men commonly ride upon them, for *Apollonius* saw near the River *Indus*, a Boy of thirteen year old riding alone upon an Elephant, sporting and pricking him as freely as any man will do a lean horse.

They are taught to bend one of their hinder legs to take up the Rider, who also must receive help from some other present standers by, or else it is impossible to mount on the back of so high a Palfrey. They which are not accustomed to ride upon these beasts, are affected with vomiting and casting, like men when they first of all take the Sea. They are ruled without bridle or reins, only by a long crooked piece of wood bending like a Sickle, and nailed with sharp nails, no man can fit more safely and more softly upon a Horse or Mule then they do which ride upon the Elephants. The *Indians* with their lesser Elephants (which they call bastard Elephants) plow their ground and corn.

The common price of Elephants is at the least five hundred Nobles, and sometimes two thousand. The *Indian* women are most chaste and continent, yet for an Elephant they take a great price to be hired for whores, for they imagine that the same and received opinion of their beauty doth countervail and cover the shameful losse of their honesty (as *Arrianus* writeth in his book of *Indica*.)

Since the time that Elephants have been tamed, their natures and dispositions have been the better observed and discovered; for they willingly obey their keepers, learning all feats of Armes, to ride,

The subtilty of  
Elephants to  
gainst their  
humors.

*Eliauu*.  
*Troglodytes*.  
*Plutarch*.

The art of  
taming Ele-  
phants.  
*Eliauu*.

*Plutarch*.

The taking up  
of their riders.  
*Vartomannus*.  
*Gillius*.  
*Nearchus*.  
*Strabo*.  
Elephants for  
the plow.

The price of  
Elephants.

Their obedi-  
ence and tract-  
able nature.



**Their love to  
their Keepers  
and all men  
that harm  
them not.**

**Their love of beautiful women.**

*Рінатсьв.*

left in him, he might not receive any harm in his alighting or falling down. Generally, as is already said, they love all men after they are tamed, for if they meet a man erring out of his way, they gently bring him into the right again, yet being wild are they afraid of the foot-steps of men if they wind their treadings before they see their persons, and when they find an herb that yieldeth a suspicion of a mans presence, they smell thereunto one by one; and if all agree in one favour, the Beast lifteth up his voyce and cryeth out for a token and watch-word to make them all his fly away.

Cicero affirmeth that they come so near to a mans disposition, that their small Company or Nation seemeth to over-go or equall most men in sence and understanding.

At the sight of a beautiful woman they leave off all rage and grow meek and gentle ; and therefore *Alisauu* saith, that there was an Elephant in *Egypt*, which was in love with a woman that sold *Corrals*, the self same woman was wooed by *Aristophanes* ; and therefore it was not likely, that she was chosen of the Elephant without singular admiration of her beauty, wherein *Aristophanes* might say as never man could ; that he had an Elephant for his rival ; and this also did the Elephant manifest unto the man : for on a day in the market, he brought her certain Apples, and put them into her bosom, holding his trunk a great while therein, handling and playing with her breasts. Another likewise loved a *Syrian* woman, with whose aspect he was suddenly taken, and in admiration of her face stroked the same with his trunk, with refection of farther love : the Woman likewise failed not to frame for the Elephant amorous devices with Beads and Corrals, Silver, and such things as are grateful to these brute Beasts, so he enjoyed his labour and diligence to her great profit, and he her love and kindeness without all offence to his contentment, which caused *Hann*. to write this verse :

*Quid tibi vis mulier nigrie dignissima barris?*

At last, the woman dyed, whom the Elephant missing, like a lover distracted betwixt love and sorrow fell beside himself and perished. Neither ought any man to marvel at such a passion in this Beast, who hath such a memory as is attributed unto him, and understanding of his charge and business, as may appear by manifold examples: for *Amipater* affirmeth that he saw an Elephant that knew again, and took acquaintance of his Master which had nourished him in his youth, after many years absence.

Their revenge  
of hams and  
observation of  
the measure of  
their meat.

When they are hurt by any man, they seldom forget a revenge, and so also they remember on the contrary to recompense all benefits, as it hath been manifested already. They observe things done both in weight and measure, especially in their own meat. *Agnon* writeth that an Elephant was kept in a great mans house in *Syria*, having a man appointed to be his Overfeer, who did daily defraud the Beast of his allowance : but on a day as his Master looked on, he brought the whole measure and gave it to him : the Beast seeing the same, and remembering how he had served him in times times past, in the presence of his Master exactly divided the Corn into two parts, and so hid one of them aside : by this fact shewing the fraud of the servant to his Master. The like story is related by *Plutarch* and *Ælianus*, of another Elephant, discovering to his Master the falshood and privy theft of an unjust servant.

*Strabo.*

*Gilms.*

about an unjuſt reward, *There are certain Springs of water, which if at any time they dry up, by the teeth of Elephants they are opened and recovered again. They are moſt gentle and meek, never fighting or ſtriking Man or Beaſt, except they be provoked, and then being angry, they will take up a man in their trunk and caſt him into the air like an arrow, ſo as many times he is dead before he come to the ground. Plutarch affirmeth, that in Rome, a boy pricking the trunk of an Elephant with a goad, the Beaſt caught him, and liſt him up into the air to ſhoot him away and kill him: but the people and ſlanders by ſeeing it, made ſo great a noiſe and cry thereat, that the Beaſt let him down again ſaſe and ſoftly without any harm to him at all; as if he thought it ſufficient to have put him in fear of ſuch a death.*

Gilins.  
Philostratus.  
Their mourn-  
ing in secret.  
Aristotle.  
The length of  
their life.  
Arrianus,  
Ælianus.

In the night time they seem to lament with sighs and tears their captivity and bondage, but if any come to that speed, like unto modest persons they refrain suddenly, and are ashamed to be found either murmuring or forrowing. They live to a long age, even to 200 or 300 years; if sicknesses or wounds prevent not their life: and some but to a 120 years; they are in their best strength of body at threecore, for then beginneth their youth.

of *Iuba King* of *Lybia* writeth, that he hath seen tame Elephants which have descended from the Father to the son, (by way of inheritance) many generations: and that *Ptolemus Philadelphus* had an Elephant, which continued alive many Ages, and another of *Seleucus Nicator*, which remained alive to the last overthrow of all the *Antiochi*.

The Inhabitants of *Taxila in India* affirm, that they had an Elephant at the least three hundred and fifty years old, for they said it was the fame that fought so faithfully with *Alexander* for King *Porus*, for which cause *Alexander* called him *Alex*, and did afterward dedicate him to the Sun, and put certain golden chains about his teeth with this inscription upon them: *Alexander filius Iovis Aemem Soli: Alexander* the son of *Jupiter* consecrateth this *Alex* to the Sun. The like story is related by *Iuba*, concerning the age of an Elephant, which had the impression of a Tower on his teeth and was taken in *Atlas* 400 years after the fame was engraven.

Of the eating  
Elephants.  
*Strabo.*

There are certain people in the world which eat Elephants, and are therefore called of the *Nomades* (*Elephantophagi*) Elephant-eaters, as is already declared: there are of these which dwell in *Parthia*.

*Daraba*, near the Wood *Emmenet*, beyond the City *Saba*, where there is a place (called the hunting of Elephants. The *Troglodyte* live also hereupon, the people of *Arisch* call *Afacha*, which live in Mountains, do likewise eat the flesh of Elephants, and the *Alibara* of *Megabari*. The *Nomades* have Cities running upon Chariots, and the people next under their Territory, cut Elephants in pieces, and both sell and eat them.

Some use the hard flesh of the back, and others commend above all the delicates of the world the reins of the Elephants; for that it is wonder that *Asinus* would write, that there was nothing in an Elephant good for meat, *except* the trunk, the lips, and the marrow of his horns, or teeth. The skin of this Beast is exceeding hard, not to be pierced by any dart; whereupon came the Proverb, *Cuicum haud potest Elaphus Indare*; the Indian Elephant careth not for the biting of a Gnat, to signify a sufficient ability to resist all evil, and that no wrongs done mult not revenge small injuries.

It cannot be but in such large and vast bodies their blood also be nourished: some diseases, and that many (as Siraso saith) will more first of all there be clearest in the world: his able to endure cold or Winter, for their impurity of cold bringeth inflammation. Also in Summer, when the lame is hottest, they cool one another by casting dirty and filthy water upon each other: or else run into the roughest Woods of greatest shadow. If hath been shewed already, that they devour Chamæleons, and thereof perish, except they eat a wife Olive.

When they suffer inflammation and are bound in the belly, either Black Wines, or nothing will cure them. When they drink a Leach they are grievously pained: for their wounds by darts or otherwise, they are cured by Swines' uen, or Dittany, or by Oyl, or by the flowers of the Olive. They fall mad sometime, for which I know no other cure, but to tye them up full in Iron chains. When they are tyred for want of sleep, they are recovered by rubbing their shoulders with Sals, Oyl and Water. Cows milk warmed and infused into their eyes, cureth all evils in them, and they presently like reasonable men acknowledge the benefit of the medicine.

The medicinal virtues of the Beate are by Authors observed to be these; The blood of an Elephant and the ashes of a Wasail, cure the Great Leprosie; and the same blood is profitable against all Rheumatic fluxes, and the *Sciatica*. The Beate dried and cold, or heavy fat and cold is abominable; for if it be food and steeped in Vinegar, it breedeth a great seed, and given to a Woman with childe, it maketh her plentifully suffer abortion. But if a man taste thereof salted and steeped with the seed before said, it cureth an old cough. The fat is a good Antidote either by Ointment or Perfume; it cureth also the pain in the head.

The medicines  
in Elephants.  
*Marcellus.*

Isidorus.  
Rafis.  
Albertus

The Ivory or tooth is cold and dry in the first degree, and the whole substance thereof corroborate the heart and helth conception: It is often adulterated by Filthes and Dogs bones burnt, and by white Marble. There is a *Spodium* made of Ivory in this manner: Take a pound of Ivory cut into pieces, and put into a raw new earthen pot, covering and gleying the cover with lome round about, and so let it burn till the pot be thoroughly hardened: afterward take off the pot, and beat your Ivory into small powder, and being so beaten, sift it, then put it into a glass, and pour upon it two pound of distilled Rose-water, and let it dry. Thirdly, beat it unto powder again, and sift it the second time, and put into it again so much Rose-water as at the first, then let it dry, and put thereunto as much Camphire as will ly upon three or four single Groats, and work it all together upon a Marble stone into little Cakes, and so lay them out where the air may not corrupt them. The vertue hereof is very precious against spirting of the Heart, and the Bloudy flux, and a most good for refrigeration without danger of binding the Stomach.

[illegible]

The time by counting down a lowly "one, two, three," and calling a very loud "now!" which often sends those vermin—*the time*—scrambling caterpillar-like off their feet. With a woman's intuition, she drives Chanté or marries her to a house.



Of the 90K

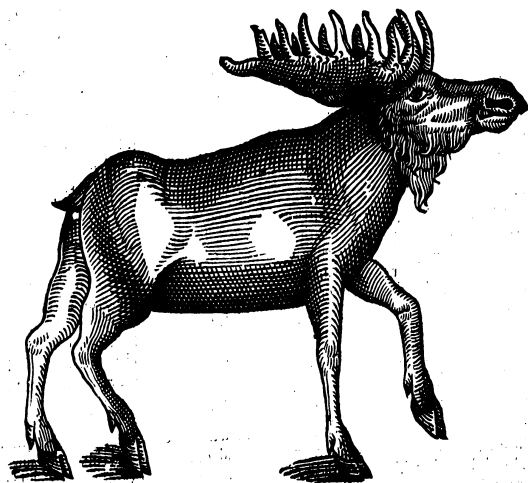
As the Elephant last handled, so it will not live in any Country of the world, but in the hot Eastern, and Southern Regions; so the Elephant in the contrary is most impetuous of all heat, and the hottest not but in the Northern and cold Countries, *as in China*, and the Country under that Climate will not preserve an Elk alive, as it has been often tryed by experience: For which cause, they are not found but in the colder Northern Regions, *as in Russia, Hungary, and Ulyria, and the Wood Herynia*, and among the *Boruffen-Soymsen*, and most plentiful in *Scythia* (which *Grecians* call the *Celtes*) for all the Ancients called the Kingdoms of *Germany*, and the North, *Celtarum Regnum*, Countries inhabited by the *Celts*.

The place of  
their abode.  
*Banarā bara*

Polizee.  
Countries  
breeding Elks;

1000

The Figure of the ELK with Horns.

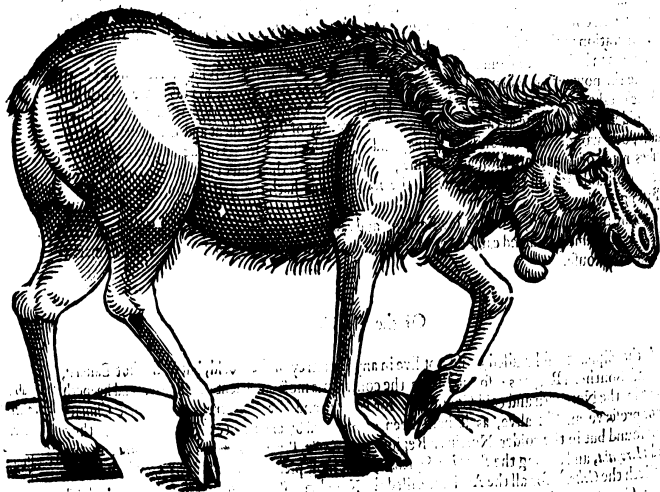


The Name of  
this Beast.

An Elk the  
same that  
Machlis.

This Beast is called in *Greek*, *Alke*; and in *Latine*, *Alces*, or *Alice*; which was a name of one of *Adams* Dogs in *Ovid*: the *Turks*, *Valachians*, the *Hungarians*, *Tatars*, the *Illyrians* and *Polonians*, *Las*; in the singular, and plurall, *Luske*, for many Elks. *Albertus Magnus* calleth it *Alcher* and *Ally*, and afterward *Equieurus*, a Horse-Hart. The *German*, *Elch*, *Ellend*, and *Ellent*, by a *Monastick* of *Alke*, or *Alice*: and for my part I take it to be the same Beast which *Pliny* calleth *Machlis*, for there is nothing attributed to an Elk which also doth not belong to *Machlis*.

The ELK without Horns.



I finde

I finde not any unresconcilable difference among Authors concerning this Beast, except in *Cesar*, lib. 6. of his Commentaries, who by the relation of other, (not by his own sight) writeth that there are Elks in the *Herzian* Wood, like unto Goats in their spotted skins, who have no horns, nor joints in their legs to bend withall, but sleep by leaning unto trees like Elephants, because when they are down on the ground, they can never rise again. But the truth is, that they are like to Roes or Harts, because Goats have no spotted skins, but Deer have, and there may easily be a slip from *Cypres*, a Roe, to *Coprus*, a Goat: and *Cesar* himself confesseth, that the similitude is in their spotted skins, which are not competent in Goats, but in Roes.

And whereas he writeth that they have no Horns; the error of this relator may be this, that either he had only seen a young one before the horns came forth, or else an old one, that had lately lost his horns; and by this I suppose that the authority of *Cesar* is sufficiently answered, so as we may proceed to the description of this Beast collected out of the ancient Writers, *Paulus*, *Vopiscus*, *Cesar*, and *Solinus*; *Pliny*, and the later Writers consenting with them in all things, (excepting *Cesar* in the two things aforesaid) *Albertus Magnus*, *Mathew*, *Michuanus*, *Seb. Munster*, *Erasmus*, *Joh. Jansson*, *Bonardus*, *Baron* of *Ballice* a *Polonian*, *Johannes Kentmannus*, *Jo. Pontanus*, *Antonius Schnebergerus*, *Christophorus Wirsungus*, and that most worthy learned man *Georgius Joachimus* of *Rhetia*, and *Barton Sigismund*.

*Paulus* supposeth it to be a Beast betwixt a Hart and a Camel, and *Albertus*, betwixt a Hart and a Horse; who therefore, as it hath been said, calleth it *Equi-cervus*, a Horse-Hart; but I rather, by the horns afterward described, and by the foot which *Bonardus* had, do take and hold it to be as big every way as two Harts, and greater then a Horse; because of the labour and qualities attributed thereto: whereunto also agreeth *Albertus*.

In *Suedia* and *Riga* they are tamed, and put into Coaches or Charriots to draw men through great snows, and upon the ice in the Winter time they also are most swift, and will run more miles in one day, then a Horse can at three. They were wont to be presents for Princes, because of their singular strength and swiftness; for which cause *Alciatus* relateth in an emblem, the answer of *Alexander* to one that asked him a question about celerity, whether haste doth not alway make waile: which *Alexander* denyed by the example of the Elk in these Verses:

*Alciatus gemis insignia sustinet Alce,*  
*Unguisibus & [meeden] ferri [anaballomenus]*  
*Constat Alexandrum sic respondisse roganti,*  
*Qui tu obivisset tempore gesta brevi,*  
*Nunquam inquit differre volens, quod & indicat Alce,*  
*Fortior hec dubites, ocyus annis fiet?*

*Pliny* affirmeth (in my opinion) very truly that this Beast is like an Oxe, except in his hair, which is more like to a Hart, his upper lip is so great, and hangeth over the neather so far, that he cannot eat going forward, because it doubleth under his mouth, but as he eateth he goeth backward like a Sea-crab, and so gathereth up the grafs that lay under his feet. His mane is divers both upon the top of his neck, and also underneath his throat it buncheth like a beard or curled lock of hair, howbeit, they are alway maned on the top of the neck. Their neck is very short, and doth not answer to the proportion of the residue of his body, and therefore I have expressed both figures of the Elks.

Their fore-head is very broad, two spans at the least: it hath two very large horns, which we have here also expressed, both for the right side and the left: so as they bend toward the back in the plain edge, and the spires or pikes stand forward to the face: both males and females have horns, they are solid at the root, and round, but afterward branched, and grow out of their eye-lids, they are broader then a Harts, and are also very heavy, for they weigh at the least twelve pounds, and are not above two foot long, and the breadth measured from the longest spire to the other opposite side, about ten inches: the root next to the skin, is more then a man can well gripe in his hand, and therefore here is expressed the figure of both horns, both in male and female; for there is not any difference in their natures that I can learn, and these horns they lose every year. His ears and back are very long, and hanging down, the colour for the most part like a Hart, and sometime white; and *Munster* affirmeth, that in the Summer they are of russet colour, and in the Winter brown or blackish coloured. His fore-legs without all joints to bend, herein resembling an Elephant, and therefore it sleepeth leaning to Posts or Trees, and not lying on the ground. His hoofs are cloven like a Harts, and with the fore-feet he pierceth the Dogs that hunt him, for he fighteth not with his horns, but with his fore-legs. It is a melancholick Beast, and fearful to be seen, having an ambling pace, and keeping in the wet, watry, and marshy places, delighting in nothing but in moisture. The flesh is fat and sweet, but ingratul to the palate, and engendereth melancholy. The *German* call this Beast *Ellend*, which in their language signifieth miserable or wretched, and in truth if the report thereof be not false, it is in a most miserable and wretched case, for every day throughout the year it lieth the Falling-sickness, and continueth in the pangs thereof, until the hoof of his right fore-foot touch his left ear, which comes not to pass but by the extreme torments of the body, for whilst the members are reached and stretched with many strains and Convulsions (as it falleth out in that sickness) by of Elks,

*Cesar* defect  
tion of an  
Elk.

Of the quant-  
ty and stature,  
*Bonardus*.

The taming of  
Elks and their  
labour.  
*Albertus*.

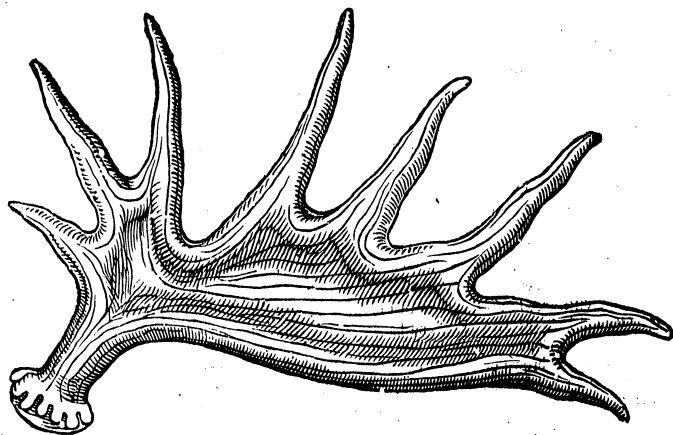
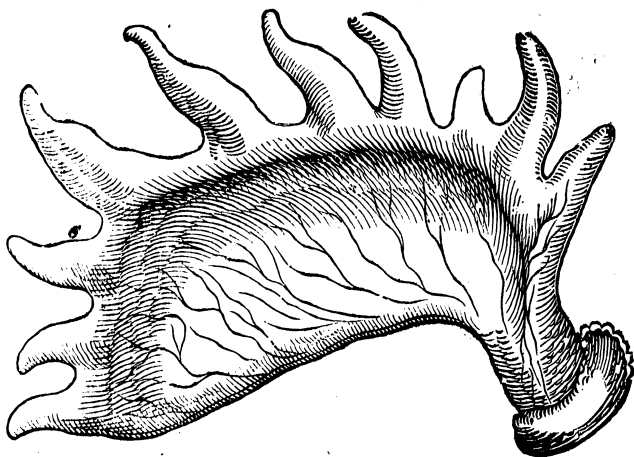
O. his parts  
and manner of  
feeding.  
*Pliny*.

*Munster*.  
*Kentmannus*.  
*Pontanus*.

*Sigismundus*.  
*Baro*.  
Of the colour.  
The multitude  
of their feet.  
The place of  
his abode.  
The name of  
this beast in  
the *German*  
tongue, and  
the true signi-  
fication there-  
of.  
The sickness  
of Elks.



by chance the aforefaid foot rubbeth the faid ear, and immediately thereupon the Beast is delivered from his pangs: whereby we are to admire the works of our Creator, which having laid fo heavy an infirmity upon this poor Beast, wherewith he is dayly tormented, yet hath he alfo provided a remedy for that evil in the hoof of his own foot, making the torments of the difeafe to be the Apothecary for applying the remedy to the place of cure.



Their fight  
with Wolves.

They live in herds and flocks together in *Scandinavia*, and when the waters are frozen up, the wilde Mountain Wolves let upon them in great multitudes together, whom they receive in battle upon the Ice, fighting most fiercely and cruelly till one part be vanquished: In the mean time the Husbandmen of the Country observe this combat, & when they see one side go to the wall, they persevere them, & take the victors part, for it is indifferent to take either the one side or the other; but most

most commonly the Elks are conquerors by reason of their fore-feet, for with them they pierce the Wolves or Dogs skins, as with any sharp pointed Spear or Javelin.

Some have been of opinion that these are wilde Affes, but they are led hereinto with no reason, except because they are used for travel and burthen as is before said, for there is no proportion or resemblance of body betwixt them: besides, they have cloven hoofs, for the most part, although *Sigismundus Barabfirm*, that there are some of this kinde which have their hoofs whole and undivided. Being wilde it is a most fearful creature, and rather desireth to ly hid in secret, then to fly, except perused by Hunters; and there is no danger in hunting of this Beast, except a man come right before him, for on his fides he may safely strike and wound him; but if the Beast fallen his fore-feet on him, he cannot escape without death. Notwithstanding it is a Beast (as hath been said) as great as two Harts, yet is it above measure fearful, and if it receive any small wound, or shot, instantly it falleth down and yeldeth to death, as *Bonarum* hunting with *Sigismund* the second King of *Polonia* in the Woods of *Lutania* tryed with his own hand, for with his hunting Spear he pierced one a very little way in the skin in the presence of the King, who presently fell down dead.

Their manner  
to hunt them  
without dan-  
ger.

Their admira-  
ble fear and  
pusillanimity.

In some Countries of ancient time (saith *Paulsanus*) they took them on this manner. They having found out the field or hill where the Beasts are lodged, they compass it in by the space of a thousand paces round in circle with welts and toils invented for that purpose, then do they draw in their nets round like a purse, and so inclose the Beasts by multitude, who commonly smelling his Hunters, hideth himself in some deep ditch or cave of the earth; for the nature of this Beast hath framed to it self a most sharp sagacity, or quick sent of smelling, being not herein inferior to any of the best Dogs in the world, because it can a great way off discover the Hunters, and many times while men are abroad in hunting of other Beasts, this is suddenly started out of her lodging place, and fo discovered, chased, and taken.

The ancient  
manner of tak-  
ing Elks.

Other again take it by the same means that they take Elephants, for when they have found the trees wherunto they lean, they so cut and saw them, that when the Beast cometh, he overthroweth them, and falleth down with them, and so is taken alive.

We read that there were Elks in the triumph of *Aurelian at Rome*, and in the games dedicated by *Vespasian*, *Apollo* and *Diana*, and celebrated by *Valerius Publicola*, were many Elephants, Elks, and Tygers. Likewise there were ten Elks at *Rome* under *Gordianus*. When they are chased eagerly, and can finde no place to rest themselves in and lie secret, they run to the waters, and therein stand, taking up water into their mouths, and within short space do so heat it, that being squirted or shot out of them upon the Dogs, the heat thereof so oppresseth and scaldeth them, that they dare not once approach or come nigh her any more.

Their resist-  
ance in the wa-  
ters.  
Monster.

The greatest vertue of medicine that I can learn or finde to be in this Beast, is in the hoof, for that worn in a Ring, it resisteth and freeth a man from the Falling evil, the Cramp, and cureth the fits or pangs, if it be put on when he is in his foming extremity: also scraped into powder and put into Wine and drunk, it is used in *Polonia* against the same evil. In like sort they mingle with Triacle, and apply it to the heart, or else hang it about their neck for an Amulet to touch their skin against that disease: and because that both in ancient time, and also now adays, this Beast is seldom seen, and more seldom taken, the hoof thereof being so often approved for the uses before said, the rarity (I say thereof) maketh it to be sold very dear, which would be (if they could be found or taken) in more plentiful manner.

The medicine  
in an Elk,

Some Mountebanks sell in stead thereof a Bugles hoof, but it may easily be described by scraping, for (it is said) it smelleth very sweet, whereas a Bugles savoureth very ill and strong. It is observed also, that it hath not this vertue except it be cut off from the Beast while he is yet alive, and that in the months of *August* and *September*, at what time these Elks are most of all annoyed with the Falling-sickness, and then it hath strongest vertue to cure it in others.

Others affirm, it wanteth his operation if it be cut off from a young one, which never tasted of carnal copulation, and so hath not been dulled thereby: but howsoever, this is certain, that sometimes it cureth, and sometime it faileth, and as there can be given no good reason of the cure, so I rather ascribe it to a superstitious conceit or belief of the party that weareth it, rather then to any hidden or assured work of nature. The skins of this Beast are dressed by Tawyers, with the fat of fishes and Alum, to make breast-plates; and to shelter one from rain, and they sell them for three or four Nobles a piece; but in *Cracovia* for fifteen Florens. It may be discerned from a Harts skin by blowing upon it, for the breath will come through like as in a Bluffe, and the hairs also of this Beast have also hollow passages in them when they grow upon the back of the Beast, or else soon after the skin is taken off.

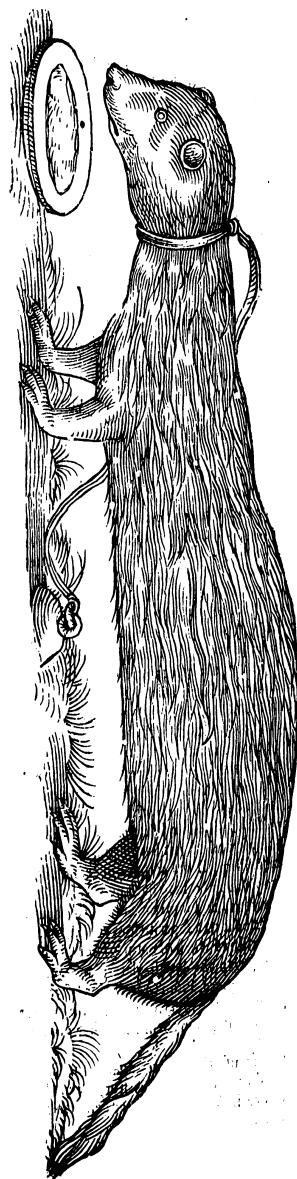
The use of  
their skin.

Some also use the Nerves against the Crampe, binding the offended member therewith, and herewith do we conclude this story of an Elk, referring the reader to the fable of *Acida* related before in *Cacus*, if he have desire to know it for the affinity betwixt the name thereof, and *Alexan* an Elk.

A Schme-  
bitgenus.



## Of the FERRET.

The names in  
Greek.The etymology  
of *Ilyx* a Fer-  
ret.Ferrets swim  
not.The Latine  
names.Their courage  
and nature in  
the cubs.  
*Scaliger*.Whether Fer-  
rets be *Ilyx*.

The

I Take it to be most true without all exception, that the *Cracians* call a Ferret *Gala agria*, a wide Weasel, *Ilyx* and *Phereokys*, although *Eymoliquus* and *Hejychius* ascribe the reason of this latter name to her lodging under Oaks and Olive-trees. *Ilyx* also was a common name of all Weasils, to those *Cracians* which never knew or saw any other then one kinde of them, or as *Scaliger* against *Cardan* will have it to signifie a wide *Campestral* Weasel, and not a tame kinde, being domestical and living in houses, and that these differ only from one another in place and manner of living, and not in colour, stature or qualities. And where *Aristophanes* citheth it among other Beasts which are devourers of fish; in my opinion there is no Beast that more desireth Fish, then Ferrets and Cats; and for this cause it hath his name *Ilyx quasi Ichthus*, of eating of Fish; and yet I cannot consent unto them which will have it defend and hunt Fish in the waters, like Otters or Beavers: for it abhorreth both swimming or diving, but near to the waters it hunteth Fish, where for the most part being wilde it remaineth.

The *Latines* call this Beast *Viverra*, and *Furo*, and *Furetus*, and *Furellus*, because (as shall be afterward manifested) it preyeth upon Conies in their holes, and liveth upon stealth, and in the earth will kill a Cony six times as big as herself, but being abroad on the land, in the open air is nothing so wilde, strong or full of courage. From *Ilyx* is derived *Ilissus*, and the German, *Ilyx*, for a Ferret: this is called by the *French*, *Furon*, *Furet*, and *Fison*, and *Isel*: by the *Spaniards*, *Furon*, and *Furam*, and from the *English*, *Ferret*, is the German *Fret*, derived by a common *Syncope*, and in the time of *Georgius Agricola*, it was called in *Germany*, *Furette*, and *Fretel*; and the *English* word seemeth also to be derived from *Fretta* in *Latine*, which by a like *Syncope* is contracted of *Viverra*, as to any indifferent learned man it may appear at the first sight of derivation.

But herein seemeth an unreconcilable difference, that it is reported of the *Ilyx* by *Gaza*, the interpreter of *Aristotle*, that it was most greedy of Honey, and for that cause it will seek out the Hives of Bees, and enter them without all fear of stings. But when *Pliny* speaketh of *Ilyx*, he doth not call it *Viverra*, or once attribute unto it the love of Honey, but rather the hatred and loathing thereof, in so high a degree, that if he talk of it, he falleth into Consumptions, and hardly escapeth death. And these things *Scaliger* alleadgeth against *Cardan*. And to prove that *Ilyx* and *Viverra*, are two distinct Beasts, and that *Cardan* was mistaken in affirming, that they were but several names, expressing one and the same Beast.

The answer whereunto may be very easie, for although *Pliny* leaveth without rehearsal their love of Honey, it doth not necessarily follow, that they love it not (as *Aristotle* before him constantly affirmeth) and *Scaliger* nameth no Author, nor bringeth any reason to demonstrate their hate of Honey, or any harm which infaeth them by eating thereof: and therefore against his authority may *Strabo* be opposed, who in his third Book, speaking of the Conies of *Spain*, and of their Hunters and Hunters, out of their holes, he taketh and nameth indifferently without all distinction and exception, *Viverra*, and *Ilyx*, for the one and other. *Nipsum* tranlateth *Ilyx*, a Martel, but without reason; for the same man finding in *Aristotle*, that there is war between Locusts and Serpents, which is fitly called *Opismachia*; whereas *Aristotle* nameth *Akris*, a Locust, he falleth in doubt whether it were not better to be *Ilyx*, a Martel, or as other copies have it *Apis*, an Aspe, which can by no means agree unto them, for there is a kinde of Locusts (called *Opismachum*) because of their continual combats with Serpents. And therefore not to stand any longer upon this difference, omitting also the conjecture of *Tzetzis*, which confoundeth *Ilyx* with *Mibius*, a Glead or Kyte, which cannot stand reasonable, because *Hemerichus* saith, there was a kinde of Caps made of the hairs of *Ilyx*, nor yet of *Alerius* his new found name of *Antistinus*, nor *Aucenna* his *Katz*, or the *French*, *Filjan*, which is a Poul-Cat.

I will descend to the description of the parts and qualities, wherein the Authors themselves at variance, make their own reconciliation, by attributing the same things to the *Ilyx*, and *Ferret*, except that of an obscure Author, which saith that *Ilyx* is *Anka-mor*, as big as a Gray-hound, and that it is wiser and more industrious in his youth and tender age, then in his perfection of strength and years.

These Ferrets are lesser then the *Melitan* or Gentlewomens Dogs, and they were first of all *Gaza*, brought out of *Africa* into *Spain*, and therefore are called by *Strabo*, *African* Weasils, because of their similitude with Weasils: for *Spain*, *Italy*, *France*, and *Germany* have not this Beast bred among them, but brought to them out of other Countries. But in *England* they breed naturally of the quantity of a mouse, and they are tamed to hunt Conies out of the earth. It is a bold and audacious Beast, enemy to all other, except his own kinde, drinking and sucking in the blood of the Beast it biteh, but eateth not the flesh. When the Warrener setteth it down to hunt, he first of all maketh a great noise to fray all the Conies that are abroad into their holes, and so having frightened them, pitcheth his Nets, and then putteth his tame Ferret into the earth, having a long string or cord with bells about her neck, whose mouth he muzzleth, that so it may not bite the Cony, but only terrifie her out of her borough and earth with her presence or claws; which being performed, she is by Dogs chased into the nets, and there overwhelmed, as is aforesaid in the history of the Conies.

Their body is longer for the proportion then their quantity may afford, for I have seen them two spans long, but very thin and small. Their colour is variable, sometime black, and white on the belly, but most commonly of a yellowish sandy colour, like Hermeline or Wool, dyed in urine. The head little like a Mouses, and therefore into whatsoever hole or chink she putteth it in, all her body will easily follow after. The eyes small, but fiery, like red hot iron, and therefore the seeth most clearly in the dark: Her voyce is a whynny cry, neither doth she change it as a Cat: She hath only two teeth in the neather chap, standing out, and not joyned or growing together. The genital of the male is of a bony substance, (wherein *Pliny* and *Scaliger* agree with *Cardan* and *Strabo* for the *Ilyx* also) and therefore it alway standeth stiffe, and is not lesser at one time then at other. The pleasure of the sense in copulation is not in the yard or genital part, but in the nerves, muscles, and tendons wherein the said genital runneth. When they are in copulation, the female lyeth down or bendeth her knees, and continually cryeth like a Cat, either because the Male pincheth and claweth her skin with his sharp nails, or else because of the rigidity of his genital. And when the female desireth copulation, except she be with convenient speed brought to a male, or he suffered to come to her, she swelleth and dyeth. They are very fruitful in procreation, for they bring forth seven or eight at a time, bearing them in their little belly not above forty days. The young ones newly littered are blinde 30 days together, and within forty days after they can see, they may be set to hunting. The Noble men of *France* keep them for this pleasure, who are greatly given to hunt Conies, and they are sold there for a *French* crown. Young boys and scholars also use them to put them into the holes of rocks and walls to hunt out birds, and likewise into hollow trees, where-out they bring the Birds in the claws of their feet.

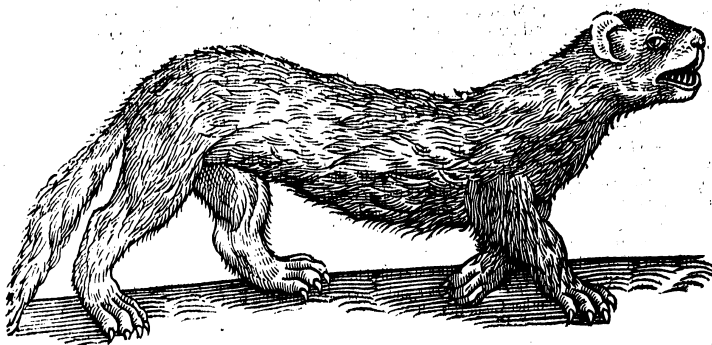
They are nourished being tamed with Milk, or with Barley bread, and they can fast a very long time. When they go, they contract their long back and make it stand upright in the middle, round like a bowl. When they are touched, they smell like a Martel, and they sleep very much: being wilde, they live upon the blood of Conies, Hens, Chickens, Hares, or other such things, which they can finde and over-master. In their sleep also they dream, which appeareth by whynnying and crying in their sleep. Whereas a long fly (called a Fryet) flying to the flaming candles in the night, is accounted among poysons, the Antidote and resister thereof is by *Pliny* affirmed to be a Goats gall or liver, mixed with a Ferret, or wilde Weasel, and the gall of Ferrets is held pretious against the poyson of Alpes, although the flesh and teeth of a Ferret be accounted poyson. Likewise the gall of a Ferret is commended against the Falling disease, and not only the gall (saith *Martellus*) but the whole body, if it be rolled, dressed, and eaten fasting, like a young pig. It is said by *Rafis* and *Aburiz*, that if the head of a Wolf be hanged up in a Dove-cote, neither Cat, Ferret, Weasel, Stoat, or other noyesome Beast dare to enter therein. These Ferrets are kept in little hutches, in houses,

Their several  
countrey of  
breed.If *Idoru*,  
*Ferretur*,  
Their drink-  
ing of blood.  
*Agricola*,  
Their pro-  
creation to hunt.  
Their colour  
and eyes.The number  
of their young  
ones.

Their food.

The medicines  
of Ferrets.

and there feed, where they sleep much: they are of a very hot temperature and constitution, and therefore quickly digest their meat, and being wilde by reason of their fear, they rather seek their meat in the night then in the day time.

Of the *FITCH* or *POUL-CAT*.

*Isidorus.*

The name and the notation thereof.

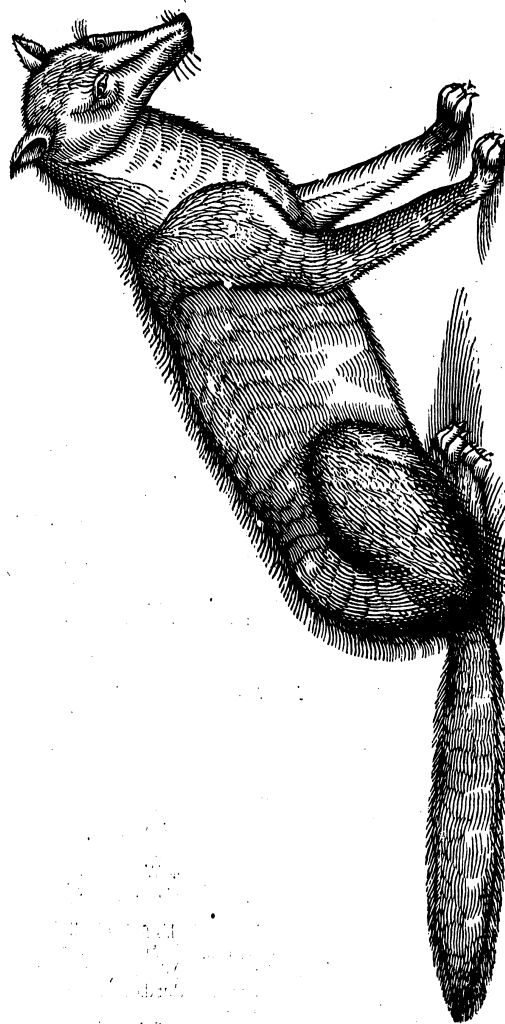
The quantity and nature of this Beast.  
*Stump-foot.*  
*Agricola.*

The skins and use of them.

The difference of a Poul-Cat, from the Wilde-Cat, is because of her strong stinking favour, and therefore is called *Putorius*, of *Putore*, because of his ill smell: for all Weasils being incensed and provoked to wrath, smell strongly, and especially the Poul-Cat; likewise when in the Spring time they endeavour procreation, for which cause among the Germans, when they would express an infamous Whore or Whoremaster, they say they stink like an *Itis*, that is a Fitch or Poul-Cat. The French call this Beast *Putois*, and *Poytois*, as it is to be found in *Cerolus Figulus*; the *Savoyans*, *Poulent*; the *Myrians* and *Bohemians*, *Tchorz*; and the *Polonians*, *Vil-dra*; and *Scaliger* calleth it in *Latine* (*Catum furiam*) by another name then *Putorius*. It is greater then an ordinary Weasil, but lesser then the wilde Martel, and yet commonly faster: the hairs of it are neither smooth and of one length, or of one colour; for the short hairs are somewhat yellowish, and the long ones black, so as one would think that in many places of the body, there were spots of divers colours, but yet about the mouth it is most ordinarily white.

The skin is stiff, harsh, and rugged in handling, and therefore long lasting in Garments, yet because the Beast is always fat, the favour of it is so rank, that it is not in any great request, and moreover it is said, that it offendeth the head, and procureth ach therein; and therefore it is sold cheaper then a Fox skin, and the fattest is always the worst of all. The Skinners approve the skins of Fitches and Martels best, which are killed in Winter, because their flesh and lust is much lower, and therefore rendereth a less hurtfull smell then at other times. The tail is not above two hands or palms long, and therefore shorter then is a Martel. In all other parts of the body it equalleth a Martel, or exceedeth very little, having thinner necks, but larger and greater bellies, the tail, legs, and breast, are also of a blacker colour, but the belly and sides more yellow. Some have delivered that the left legs thereof are shorter then the right legs, but this is found untrue by daily experience: They keep in the tops of houses and secret corners, delighting to kill and eat Hens and Chickens, whose craft in devouring his prey is singular; for to the intent that the silly creatures to be devoured may not bewray them to the House-keepers, the first part that they lay hold upon with their mouths is the head of the Hen and Chicken, and by that means stayeth his crying by cropping off the head. Some of these Fitches wander and keep in the Woods, and thereby live upon Birds and Mice, and such things: some again live by the Sea sides in Rocks, and they take Fishes like Beavers and Otters: and some creep into the Caves of hollow trees, where they eat Frogs, and most of all they delight to be near stals of Cattel, Hay-houses, and houses, where they meet oftentimes with Egges, wherein they delight above all other kindes of meat. And thus much for this Beast.

Of

Of the *FOX*.

A Fox is called in *Hebrew*, *Schwal*; and in *Chaldee*, *Thaal*; and therefore in *Psalm* 61. where the *Hebrew* readeth *Schwalim*, there the *Chaldee* tranſlateth it *Thealaia*; the *Arabians* call him *Thaleb*; and *Auven* calleth a Fox sometime *Chabel*, and also *Chalchali*; the *Greek* Septuagints, *Alophen*, and vulgarly *Alophen*; and *Alophen*; the *Latine*, *Vulpes*, and *Vulpecula* of *Vulpes*, his rumbling-pace; the *Italians*, *Volpe*; the *French*, *Renard*, and a little Fox *Renardeau*; the *Spaniards*, *Kapo*, of ravening; the *Germans*, *Fuchs*; the *Flemings*, *Vos*; and the *Myrians*, *Lisika*.

The Epithets expressing the nature hereof among Writers, both Poets and others, are these: crafty, wary, deceitful, stinking, strong-smelling, quick-smelling, cyled, warlike or contentious, wicked and rough; the *Grecians* fiery colored, and subtil for slaughter; and therefore Christ called Herod a Fox, because he understood how by crafty means he sought to entrap and kill him: and all the

The several names of Foxes in sundry languages.

The Epithets of Foxes.

Ancients

Q. 3



littered blind, in fat or any other meat killeth them, if vomit help them not, which falleth out very seldom, and the seeds of this herb have the same operation. It is reported by *Democritus*, that if wilde Rue be secretly hunge under a Hens wing, no Fox will meddle with her; and the same writer also declarath for approved, that if you mingle the gall of a Fox, or a Cat, with their ordinary food; they shall remain free from the dangers of the beasts.

Their carnal  
cupidity.

When they engender and admit copulation, they are joined like Dogs, the male upon the female; and the female when the perceiveth her womb filled, she departeth and liveth very fecer, for it falleth out very seldom that a female or Bitch-fox is taken great with young. She bringeth forth ordinarily four at a time, and those blind and imperfect, without Articles in their legs, which are perfected and framed by licking, for Bears, Wolves, Lions, Foxes, Dogs, and *Thori* which are *Mutipara* and *Mutipia*, that is, fruitful, bearing many at one time, and also Cloven or slit-footed into many claws, have not the benefit of nature to perfect their young ones in their wombes.

Kites, Vultures, and Eagles lie in wait to destroy the Foxes Cubs or Whelps. Foxes do not only engender with their own kinde, but also with Wolves, Dogs, or any other beasts of equal proportion, both of quantity and time of going with young: so the *Lacanian* Dogs are engendered by a Dog and a Fox; and the *Hyena*, of a Wolf and a Fox (as *Albertus* affirmeth) and the *Simulupa* of an Ape and a Fox, as is already in the story of Apes declared.

The diseases  
of Foxes.

There be also many evils wherewith Foxes are annoyed, and first of all he falleth sometime into madnes as a Dog, and the same evils follow a mad Fox, which already are manifested to accompany a mad Dog, and that more often in Summer than in Winter.

*Albertus*.  
*Libri*.  
*Actius*.

When a Fox feeleth himself sick, nature hath taught him to eat the gum of Pinetrees, wherewith he is not only cured, but also receiveth length of dayes. They are also vexed with the falling away of their hair, called therefore *Alopezia*, because Foxes are most commonly vexed therewith, and as we see in Plants, that some of them dry and consume through want of moisture to feed them, other are suffocated and choaked by abundance, and as it were drowned in humidity: so it happeneth in hair, which groweth out of the body of beasts, and the heads of men, no otherwise then Plants out of the earth, and are therefore to be nourished by humours; which if they fail and wax dry, the hair also shortenth with them, and as it were rotteth away in length: but if they abound and overflow, then do they loosen the roots of the hair, and cause them to fall off totally.

This disease is called *Alopezia*, and the other *Opisthis*, because it is not general, but only particular in one member or part of the body or head, and there it windeeth or indenteth like a Serpents figure.

*Michael Kirus* affirmeth, that sometime the liver of the Fox inflameth, and then it is not cured but by the Ulcerous blood flowing to the skin, and that evil blood causeth the *Alopezia*, or falling away of the hair, for which cause (as is already said) a Foxes skin is little worth that is taken in the Summer time.

The length of  
their life.

*Varinus*.

The length of the life of a Fox is not certainly known, yet as *Stumpsius* and others affirm, it is longer then the life of a Dog. If the urine of a Fox fall upon the grasse or other herbs, it dryeth and killeth them, and the earth remaineth barren ever afterward. The savour of a Fox is more strong then of any other vulgar beast, he stinketh at nose and tail, for which cause *Martial* calleth it *Oldum Vulpem*, an Old or smelling beast.

*Hic oldum clamsum ager in retia vulpem.*

The hunting  
and taking of  
Foxes.

Touching the hunting or taking of Foxes, I approve the opinion of *Xenophon*, who voucheth, *Leporum copiam venaticis studio quam vulpium dignetur*; that is, the hunting of the Hare is a more noble game or pastime then the hunting of the Fox.

*Alimus*.

*Oppianus*.

*Bellestius*.

*Textor*.

This beast is more fearful of a Dog then a Hare, for the only barking of Dogs causeth him to rise many times from his den or lodgings out of the earth, or from the middle of bushes, briars, and brambles, wherein he hid himself: and for his hunting this is to be observed, that as in hunting of a Hare it hath been already related, the Hunter must drive the beast with the wind, because it hindereth his refrigeration; so in hunting of a Fox he drive him against the wind, and then he preventeth all his crafty and subtil agitations and devices; for it stayeth his speed in running, and also keepeth his savour fresh away in the nose of the Dogs that follow him: for the Dogs that kill a Fox must be swift, strong and quick sented, and it is not good to put on a few at once, but a good company together, for assuredly the Fox will not lose his own blood till he hazzard some of his enemies, and with his tail which he windeeth every way, doth he delude the Hunters: when the Dogs are pressed neer unto him, and are ready to bite him, he striketh his tail betwixt his legs, and with his own urine wetted the same, and so instantly striketh it into the Dogs mouths, wherof when they have tasted, so many of them asit toucheth will commonly leave off and follow no farther.

*Oppianus*.

Their teeth are exceeding sharp, and therefore they fear not to assault or contend with beasts, exceeding their stature, strength, and quantity. Sometime he leapech up into a tree, and there standeth to be seen and bayed at by the Dogs and Hunters, like as a Champion in some Fort or Castle, and although fire be cast at him, yet will he not descend down among the Dogs; yea he endureth

endureth to be beaten and pierced with Hunters spears, but at length being compelled to forsake his hold and give over to his enemies, down he leapech, falling upon the crew of barking Dogs, like a flash of lightning, and where he layeth hold there he never looseth teeth, or allwageth wrath, till other Dogs have torn his limbs, and driven breath out of his body.

If at any time he take the earth, then with Terriar Dogs they ferret him out of his den again. In some places they take upon them to take him with nets, which seldom proveth, because with his teeth he tearereth them in pieces; yet by *Calanitus* this devise is allowed in this Verse;

*Es laqueus Vulpes & decipie cassi funis.*

But this must be wrought under the earth in the caves, dens, or in some perch of purpose, which is to be performed two manner of wayes, one by placing the Gin in furrowes made of wood, so as that as soon as the beast is taken by the Neck, it may presently flie up and hang him, for otherwise with his teeth he will shear it asunder and escape away alive: or else that neer the place where the rope is fastened, to slip upon the head of the Fox, there be placed some thick collar or brace, so as he can never bite it asunder.

The French have a kinde of Gin to take by the legs (which they call *Hauspied*) and I have heard of some which have found the Foxes leg in the same Gin, bitten off with his own teeth from his body, rather putting himself to that torment with his own teeth, then to expect the mercy of the Hunter, and so went away upon three feet: and other have counterfeited themselves dead, restraining their breath and winking, not stirring any member when they saw the Hunter come to take them out of the Gin, who coming and taking his leg forth, not suspecting any life in them, so soon as the Fox perceiveth himself free, away he went and never gave thanks for his deliverance: for this cause *Blondus* faith truly, that only wife and old Hunters are fit to take Foxes, for they have so many devices to beguile men, and deliver themselves, that it is hard to know when he is safely taken, until he be thoroughly dead.

A noble instance of  
a Foxes courage;

The subtlety of  
a Fox taken in  
a snare.

They also use to set up Gins for them baited with Chickens in bushes and hedges: but if the fether be not at hand so soon as the Fox is inflamed, it is dangerous but that the beast will deliver it self. In some places again they set up an iron coil, having in it a ring for the Fox to thrust in his head, and through that sharp pikes, at the farther end wherof is placed a piece of flesh, so that when the hungry Fox cometh to bite at the meat and thrusteth in his head, the pikes stick fast in his neck, and he inevitably inflamed: Moreover, as the harmefulness of this beast hath troubled many, so also they have devised more engines to deceive and take him; for this cause there is another policy to kill him by a bow, full bent, with a sharp arrow, and so tenderly placed as is a trap for a Mouse, and as soon as ever the Fox treadeth thereon, presently the arrow is discharged into his own bowels, by the weight of his foot.

Again, for the killing of this beast they use this sleight, they take of Bacon-grease or Bacon as much as ones hand, and rolt the same a little, and therewith anoint their shooes-soles, and then take the liver of a Hog cut in pieces, and as they come out of the wood where the beast lodgeth, they must scatter the said pieces in their foot-steps and draw the carcass of a dead Cat after them, the savour wherof will provoke the beast to follow the foot-steps, then have they a cunning Archer or handler of a Gun, who observeth and watcheth in secret till the beast come within his reach, and so giveth him his great and deadly wound.

But if the Fox be in the earth, and they have found his den, then they take this course to work him out. They take a long thing like a Bee-hive, and open at one end, and iron wiers at the other like a grate, and at the open end is set a little door to fall down upon the mouth, and to inclose the Fox when he entrench in by touching of a small rod that supporteth that door. This frame is set to the Foxes dens mouth, and all the other passages watched and stopped. The Fox having a desire to go forth, and seeing light by the wiers, misdeemeth no harm, and entrench into the hive which is wrought close into the mouth of his den, and being entred into it, the rod turneth the door fast at the lower end or entrance, and so the Fox is intrapped, to be disposed of at the will of the taker.

Foxes are annoyed with many enemies; and to begin with the least, the small flies, called Gnats, do much trouble and infect them, against whom the Fox useth this policy: He taketh a mouthful of straw or soft hay, or hair, and so goeth into the water, dipping his hinder parts by little and little, then the flies betake themselves to his head, which he keepeth out of the water, which the Fox feeling, dipperth or diveth all the same under water to his mouth, wherein he holdeth the hay asorelaid, wherunto the flies runne for sanctuary or dry refuge, which the Fox perceiving, suddenly catcheth it out of his mouth, and runneth out of the water, by this means easing himself of all those enemies.

The beasts  
that are ene-  
mies of Foxes,

*Albertus*.

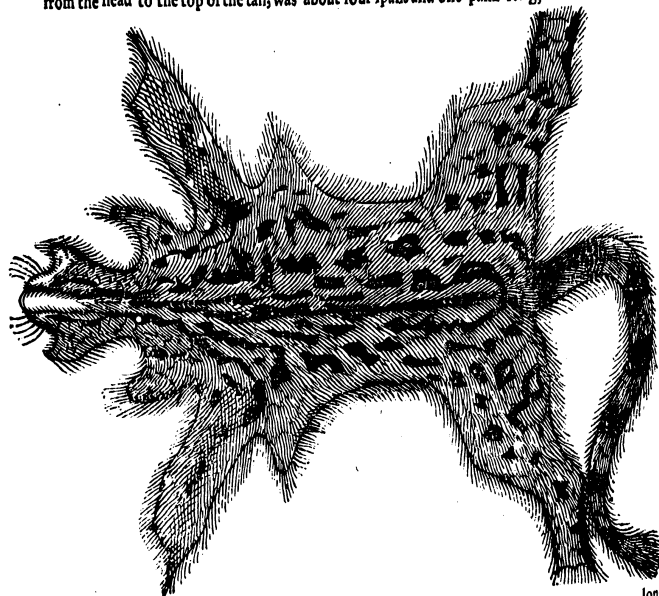
In like manner, as all beasts are his enemies, and he friend and loving to none, so with strength, courage, and policy, he dealeth with every one, not only against the beasts of the Land, but also against the monsters of the Sea. When he findeth a nest of Waspes in the earth, or in other places, as in trees, he layeth his tail to the hole, and so gathereth into it a great many of them, which he presently dasheth against the wall, or tree, or stones adjoining, and so destroyeth them, and thus he continueth until he have killed them all, and so maketh himself executor to their heaps of honey.



dance of spots, their natural and uniform order, their shining splendor and brightness, give place to no other party-coloured beast, as you may observe in the true figure thereof here declared.



Of the skin. In the next place I have thought good to express the figure of the skin taken off, which skin, from the head to the top of the tail, was about four spans and one palm long, and the tail was as



long

long as the body being fevered from the skirt: the latitude or breadth thereof in the middle, was about one span in breadth, the middle of the belly, and the upper part of the neck, were ash coloured, and in the tail were eight black circles and so many white, one successively following the other; the whole body aspersed with black spots, and the residue yellowish white.

The skin smelt sweetly and somewhat like to a Musk-cat; and from Lyons in France they are *Opiand*; brought into Germany, three or four of them being fold for a Noble. It is very probable that it is a little kinde of Panther or Leopard, for there is a little Panther which hath such spots, and besides of such a stature and harmless disposition, whose skin in old time was pretiously used for garments, and the favour thereof was very pleasant, and therefore I supersede any further discourse hereof, till we come to the declaration of the greater beast.

### Of the GOAT, Male and Female.

The male or great Goat-Buck, is called in Hebrew, *Atud*, and the lesser *Seir*, and *Zelr*. The *Chalde* translateth it, Gen. 13. *Tetis-jaii*, and Numb. 15. *Ize*; the *Arabians*, *Tam* and *Mare*; the *Persians*, *Alshan*, and *Buian*; the *Grecians*, *Traghi*, or devouring of ravening in meat, according to the Verse;

*Tragus ab Edendo quod grana fradipane.*

Also *Chimiron* and *Enaroban*; the *Latins*, *Hircum*, and sometime *Caper*, which word properly significeth a Gelded Goat, as *Marital* useth in this Verse;

*Dum jugulas hircum, saltus es ipse Caper.*

The *Israhelites*, *Beccho*; the *Germans*, *Bock*, and for distinction sake, *Geisbock*, and *Reetbock*, and *Bock*; the *Spaniards*, *Cabron*; the *French*, *Bouc*, the *Illyrians*, *Kozel*.

The reason of the *Latin* word *Hircum*, is derived of *Hirtus* (signifying rough) by reason of the roughness of their bodies. And it is further to be understood, that the general kind of Goats (which the *Latins* distinguish by *Hircus*, *Capra*, and *Haem*, that is, by their sex, or by their age; the *Hebrews* call them singularly *Ex*, and plurally *Leim*, Numb. 15. for a Goat of a year old, you shall read *Ize-jaii*, *Seir*, the *Chalde* useth also the general word *Oze*; the *Arabians*, *Schaab*; the *Persian*, *Buz*, and whereas *Levit*. 16. *Seir* is put for *Caper* a gelded Goat, there the *Chalde* reudereth it *Zephrah*; the *Arabians*, *Atud*, and the *Persian* *Buzgalate*. And in the same Chapter you shall read *Azazel*, which *Daniel* *Klimbi* rendereth for the name of a mountain neer *Sinal* where Goats use to feed and lodge: and the *Synagists* translate it *Appompaion*, signifying emission or sending away, and for this cause I suppose, that when the Scape-goat was by the Priest sent out of the Temple, he went to that mountain, and therefore the word *Azazel* seemeth to be compounded of *Ex*, a Goat, and *Azal* *Iuzi*, that is, he went; for the Scape-Goat went and carryed away the evil.

The *Grecians* call the female Goat *Aix*, which seemeth to be derived of *Ex* the Hebrew word. The *Arabians*, *Dokh*, and *Metaham*, as I find in *Avsen*; the *Saracens*, *Anse*; the *Italians*, *Peccha*, changing *h* from the male into *p*; and the *Spaniards*, *Caprin*; the *French*, *Chener* or *Cheneure*; the *Germans*, *Geis*; the *Illyrians*, *Kozel*; and the *Tuscanes* at this day call a female Goat *Zebel*. And this may suffice for the names of both male and female.

Their nature is to be declared severally, except in those things wherein they agree without difference: and first of all, the male is rightly termed *Dux* or *maritus* *Caprarum*, the guide and husband of the females, and therefore *Virgil* saith of him not improperly, *Vir gregis ipse Caper*. The He-goat is the husband of the flock; and except in his genitals and horns, he differeth not in any proportion or substance from the female. His horns are longer and stronger than are the females, and therefore upon provocation he striketh through an ordinary piece of Armour or Shield at one blow: his force and the sharpness of his horns are so pregnable. He hath many attributes among the learned, as left-sided, aged, greedy, bearded, swift, long-legged, horn-bearer, captain of the flock, heavy, rough, hoarse-voiced, rugged, unarmed, unclean, strong-smelling, treacherous, bristler, wanderer, vile, wanton, sharp, thinking, two-horned, and such like: whereof the nature and qualities are so deciphered, as it needeth no long treatise of explication.

There is no beast that is more prone and ready to lust than is a Goat, for he joyneth in copulation before all other beasts. Seven dayes after it is yoked and kiddened, it beareth and yeeldeth seed, although without proof. At seven moneths it engendeth young, and for this cause that it begetteth so soon, it endeth in five years, and after that time it is reckoned to be unable to accomplish that work of nature. When the *Egyptians* will describe fecundity or ability of generation, they do it by picturing of a male Goat.

That which is most strange and horrible among other beasts is ordinary and common among these, for in them force the Brother joyneth with the Sister, and a Camel can never be brought to cover his Dam: but among these the young ones being males, cover their Mother, even while they suck their milk. If they be fat, they are lesse venereous then being macilent or lean. *Herodotus* declareth that in his time a Goat of *Mendesia* in Egypt, had carnal copulation with a woman in the open

R

sight

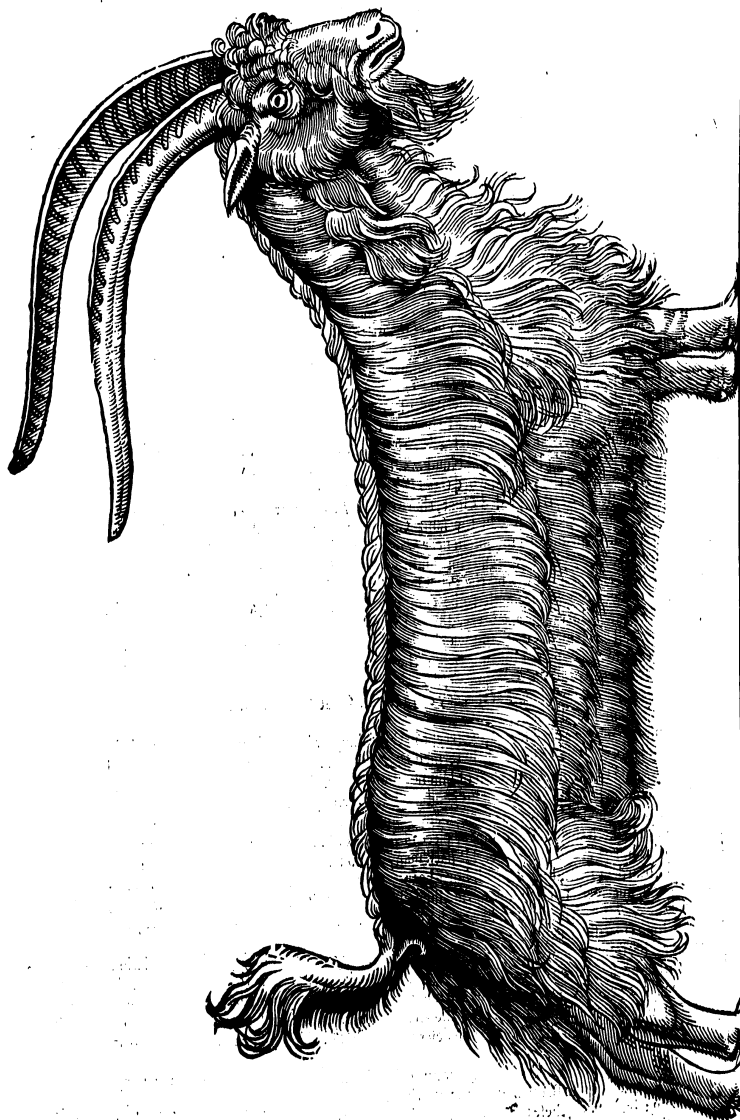
Columellid.

The venereous disposition of Goats, *Ælianus*.

Their several parts. The Epibery of Goats.



sight of men, and afterward was led about to be seen. When they desire copulation they have a proper voice wherewithal (as it seemeth) they provoke the female to love. This is called it in *Italy*, *Buccari* and *Bicarie*, which the *Venetians* apply to all lecherous companions as commonly as a proverb, and this they never use but at that time. By reason of his lust, his eyes sink deep into the corners of their holes (called *Hirqui*) and *Apuleius* with other *Grammarians* do derive the word *Hircu*, whereby this beast is called, from that disposition.



By drinking salt water they are made defirous and apt to procreation. At that time they fight mutually one with another for their females, and it is a term among the late writers, to call those men *Hirci*, Goats, which are contented to permit other men to lie with their wives in publick, before their own faces for gain, because they imagine that such is the property of Goats. But I know not *Calvus*. with what reason they are moved hereunto, for there is a memorable story to the contrary.

In *Sicilie* there was a young man called *Crabbi*, which being not able to retain lust, but forsaken of God, and given over to a reprobate sense, committed buggery with a female Goat, the which thing the master Goat beheld and looked upon, and dissembled, concealing his mind and jealousy for the pollution of his female. Afterward finding the said young man asleep, (for he was a Shepherd) he made all his force upon him, and with his horns dashed out the buggers brains. The man being found dead on this manner; and the Goat which he had ravished delivered of a monster, having a Mans face, and a Goats legs, they call it *Silvanus*, and place it in the rank of idoll Gods, but the wretched man himself was buried with more honour then becomed, for they gave him a noble funeral, and finding a River in *Accha* which mingled water with another, they called it *Crabbi*, after the name of that unnatural and beastly monster; whereupon also came the *Italian* *Crabbi* which *Strabo* remembreth. By which story it is evident, that jealous rivalry reflect as well in Goats as in Men of more reasonable capacity and understanding.

The females desire of copulation is no lesse then the males, for while they suck they admit the male, and at the seventh month they conceive. The best time of their admission to procreation is about the end of Autumn (according to *Columella* his opinion.) They are not filled the first day of copulation, but the second or third, and those which are joyned in *November* do bring forth their young in the Spring when all things grow fresh and green: wherefore if they chance to be slack, and not willing to engender or couple, their keepers use this sleight or policy, to procure and stir up their lust. They rub their udders with Nettles untill they constrain bloud, and afterward with a handful of Salt and Nitre, or else with Pepper or Myrrhe; after which rubbing, their desire of copulation much increaseth, and it maketh the female to provoke the male and undergo him more willingly; and this thing also procureth in them abundance of milk (as *Aristotle* affirmeth) he had seen tryed by making experiment thereof upon the breasts of Women, Virgins, and Widows; And generally all the keepers of Cattel do herewith rub their genitals, for the furthering and provoking in them carnal copulation, with the things aforesaid.

They being filled and with young, they carry them in their belly five moneths before deliverance. After three years old the female ceaseth to retain in her self or confer to her Kids the strength of nature, and the male after four, so that it is not a part of good husbandry to keep their young which they bring forth after those years, but rather to kill them and make them away: so also it is not good to keep their firstlings, or those which are first of a engendered, but rather the second or third feed of procreation. Some of them bring forth twins, and some more, as it is reported of the Goats of *Egypt*, which bring forth five at a time, because they drink of the fruitful river of *Nilus*: for the Goats-herds of the Country do give thereof to their Cattel, and fetch it into all parts of that region, and in *Ibyria* they breed twice a year, bringing sometime three, four, or five at once, but three at a time are never to be kept, but killed and eaten, for they are accounted not worth their bringing up; only cold maketh them to suffer abortments, and sometimes they bring forth monsters like to other Cattel (for all little beasts are more apt to engender monsters then the greater.)

Concerning the time that they bear young, it is in *Italy* eight years, and being fat they are not apt to conceive, wherefore they make them lean before they admit them to their bucks. One male is sufficient for ten females, and some (saith *Varro*) provide but one for 15 (as *Mensis*) and other but one for 20 (as *Murus*.) There is no creature that smelleth so strongly as doth a male Goat, by reason of his immoderate lust, and in imitation of them the *Latins* call men which have strong breaths (*Hirci-ros*) Goats: wherefore *Plautus* saith to an old lecherous fellow, which could not keep his lips from flaving of women,

*Cum sis jam atatis plenus; anima fatida,  
Senex hircosus in osculare mulierem.*

And therefore *Tiberius Caesar* who was such a filthy and greasie-smelling old man, was called (*Hircus vetulus*) an old Goat, in the *Atellanian Comadie*. They conjecture of men that have hairy legs to be unchast and full of lust, by reason of their similitude with a Goat, and those which have a shrill and clamorous voice, the *Grecians* call *Margoi*, (that is, blockheads.) Those which have eyes like to Goats they call *Aegopoi*, Goat-eyes, that is very red eyes. The *Egyptians* affirm that their female Goats when *Sirius* the Star in the beginning of Dog-dayes riseth with the Sun, do continually look upon the East, and that their attentive observation is a most certain argument of the revolution, that is the appearance and departure of the said Dog dayes. The like things do the *Lybians* report of their Goats concerning that Star, and moreover that they foresee and foretold change of weather, for they depart from their stables, and run wantonly abroad before showers, and afterward having well fed of their own accord return to their folds again.

Concerning the description of their several parts, it is good to follow the direction of *Cassinius*, first to look to their age (as is before said) if men desire to provide Goats for herd-breed and profit,

A memorable story of the punishment of buggery.

*Calvus*.

*Strabo*.

The lust of the females and their copulation.

Means to stir up the Goats to copulation.

*Ælianus*.

*Florentinus*.

The time of their going with young.

The multiplication of young Kids.

*Ælianus*.

*Aristotle*.

The time of their young bearing.

The strong smell or savour of a Goat.  
In *Mercat*.

*Plutarch*.

A leech in female Goats.

*Ælianus*.

The description of Goats and their best property.

Lorenz.

profit, so as their Kids may be like them, and they bear young or continue procreation eight years at the least. And for their outward parts, let them be firm, great, well compacted, full of muscles, and the superficies of their whole body be soft and equal, without bunches or indurations; therefore a thick hair, two dugs hanging under their snout or chin, are good signs of the best Goats.



The several  
kinds of Goats  
Albertus.

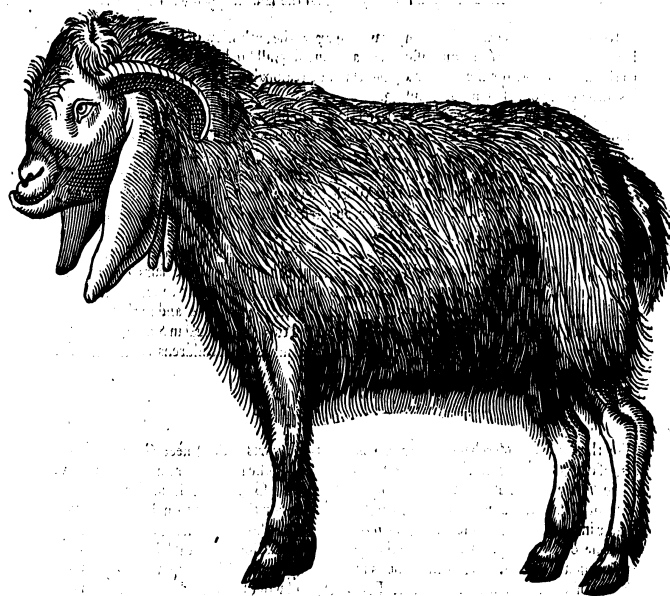
There are two kinds of Goats, one horned, and of this sort the long sharp-horned beasts, with broad foreheads, are the most approved, and by the civility of their horns their age is discerned. But the unhorned are best for breed, procreation and milk, and such are the Caprian Goats, which are for the most part white, flat nosed, and little of growth. Their eyes are very deep in their heads, and therefore

therefore their sight sharp, strong and continual seeing bright and clear in the night, but the colour of their eyes variable, like to the colour of their bodies. The males have more teeth than the females, for the females want their upper teeth. But males and females have large beards under their chins, and this is called *Arctos* (saith *Synonym*) but the reason hereof is, because that when a Goat is taken by the beard and drawn out of the fold, all the residue stand amazed, and so also when any of them hath eaten Sea-bolly (cald *Eryngium*) so that *Aristotle* confoundeth *Eryngium* for *Arctos*, and so taketh one for another. Once in *Lemnos* there was a male Goat which had so much hulk wrung out of his paps growing betwix his legs, that therewith a Calf, by licking it received the beelings, but afterward the male kid begotten by the same Goat had the like udders, whereat the owner being much amazed, because it was a prodigious thing, for his satisfaction asked counsel at the Oracle, from whom he received this answer, that it betokened nothing but plentiful increase of his Cattel. The females have two udders under their loins next to the small of their belly, except the *Libian* Goats, and their udders lie under their breast or forepart of their belly like an Ape. In *Naxos* the Goats have greater Gals then in any other part of the world; and the forepart is held prodigious: On the contrary, in *Chaleis* the Goats have no gail at all. They have many bellies and a round Milt, which thing no other horned beast hath, except a Sheep. The males have harsher hairs then their females, and the *Libian* Goats have hair as long as womens, and very rough curled, which the inhabitants shear off every year, and therewith the Shipwrights make cable ropes: but in *Cilicia* and *Phrygia*, they shear them and make the stuff called *Zambelot*: and another kinde of Cloth called *Maballake*. In *Argolis* they make Fents of Cloth compiled of Asses and Goats hair, and it seemeth that *Cilicia* received his name of this kinde of Cloth, which is called in *Latin*, *Cilicium*, for else that this Cloth was first invented among them, whereupon it received that denomination; but among the *Grammarians* and *Poets*, *Lana Caprina* (Goats wool) grew to a proverb, to signifie a thing of no weight or moment, as it is in *Horace*;

*Alter vivatur de lana sopo caprina,  
Propugnatus mugis armatus.*

There are another sort of Goats which are called *Syrian* Goats, and of some *Mambrin* Goats, and most commonly *Indian* Goats, because they are most noble in that Country, and that in *Cypris*; and likewise in the Region of *Danajata*, for *Mambrin* is a Mountain near *Hobron*, from whence it is probable, that the word *Mambrin* cometh; wherefore I have thought good to expresse the figure both of the greatest of that kinde, as it was taken by *Amosius Musa Brasavolus*, Physician to the Noble Duke *Heracles de Este*, at *Ferraria*, by one of these Goats brought thither to be seen.

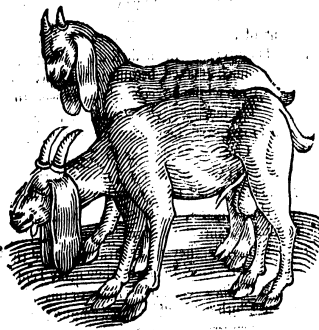
Of the Mem-  
brin or Syrian  
Goats.



R 3

These

These lesser were found pictured in an old manuscript in Germany, which book did intreat of the Holy Land. The greater Goat I conjecture to be the same which *Les Afr* calleth *Adimain*, and is found in *Mauritania*, being as tall as an *Ass*, and hath very long broad ears pendant, and under them next to their necks two things like dugs or paps, which hang down from their throat, and these are most fruitful in milk, and with these the *Lybians* plow, and keep them in stead of Kie and other Cattel, for they milk them, and of their milk make Butter and Cheese. Their hair is very short, and they very gentle and familiar; so that the said *Les* affirmeth, that when he was a young man; and loved those rash and wanton sports wherewithal youth are delighted, he got upon one of these, and rode quietly upon the back of it above a quarter of a mile. They keep, being wilde, in the Deserts of *Lybia*, and if at any time they stray or wander into *Nimidia*, and the fields thereof, it is accounted by the people and inhabitants a prodigious and monstrous thing.



The lesser kinde I conjecture to be the right *Mambres* or *Syrian* Goat, although some of the late writers call it an *Indian* Goat; the reason is, because (as hath been said) they call all strange beasts by the names of *Indians*; if they finde them not in their own Countrey. The ears of it are large and broad, as the picture describeth, and such ears have the Goats of *Gallia-Narbon*, being at the least as broad as a mans span; they are of colour like wilde Goats, their horns very sharp, and standing not far distant one from the other, and have stones like a stone Horse, being in all other parts not unlike to the vulgar and common Goat.

Some curious herdsmen (as *Alomen* and *Arbelani*) have delivered to the world, that Goats take breath through their ears; and *Phylar* approveth their conceit, because he had seen an experiment of a Goat, that his mouth and nostrils being stopped fast, nevertheless he seemed not to be troubled for want of breath: and for this also is alledged the authority of *Oppianus*, who writeth of certain Goats (called *Agari*) that they have a certain hole or passage in the middle of their head, betwixt the horns, which goeth directly unto the liver, and the same stopped with liquid Wax, suffocated or smothered the beast.

If this be true (as I would not any way extenuate the authority of the writer) then it is very likely that some have (without difference) attributed to all kinds of Goats that which was proper to this kinde alone, for the former opinion is not reasonable: Nevertheless I leave every man to his own liberty of believing or refusing.

There is no beast that heareth so perfectly and so sure as a Goat, for he is not only help in this sense with his ears, but also hath the Organ of hearing in part of his throat, wherefore when the *Egyptians* describe a man which hath an excellent ear, they expresse him by a Goat. There are some kinde of Goats in *Illyria* which have whole hoofs like a Horse, and these are only found in that Region. In all other Nations of the World they are cloven footed.

The use of their several parts is singular, and first of all to begin with their skin, the people of *Sardinia* (as saith *Nymphidorus*) nourish Goats for their skins, whereof they make them garments, being dressed with the hair upon them; and they affirm strange virtue in them, namely, that they heat their bodies in the Winter, and cool them in the Summer; and the hairs growing upon those skins are a cubit long, therefore the man that weareth them in Winter time, turneth the hairy side next to his body, and so is warmed by it; and in Summer the raw side, and so the hair keepeth the Sun from piercing his skin and violence of heat: And this also is usual in *Suevia*, where the women wear garments of Goats hair in the Winter, and also make their childrens coats thereof, according to *Virgils* saying in *Mæcenas*,

Et cinctus villosa tegmine Capra.

For this cause the Merchants buy them rough in those parts of *Savoy* neer *Genova*, and their choice is, of the young ones which die naturally; or are kild, or else such as were not above two years old. The *Tyrians* in the Persian war, wore upon their backs Goat-skins. In ancient time they made hereof *Diphthera*, that was a kinde of Parchment, whereon they wrote on both sides, and had the name in Greek from that use: which *Hermolaw* by a metaphorical allusion, called *Opisographi*. From the use of these in garments, came the appellation of harlots to be cald *Pellices*, and a whores bag was called *Pennis Scortæ*, such a one is used by Pilgrims which go to visit the Church of Saint *Peter* of *Cale*, and such Carriers or Foot-polls had went to use in their journeyes, which caused *Martial* to write thus;

Ingradiere

Ingradiere viam calo licet usq; sereno,  
An subitas nupquam sources cepit aquar.

The Sandals which men were wont to wear on their feet in the East Countries, were also made of Goats skins, and there was a custome in *Albani*, that men for honour of *Bacchus*, did dance upon certain Bottles made of Goats skins, and full of wind, the which were placed in the middle of the Theatre, and the dancer was to use but one leg, to the intent that he might often fall from the slippery bottles, and make the people sport; whereunto *Virgil* alluded this saying;

Mallibus in pratini nactus saliere pro vires.

Plinij.

There is also a *Ladanum* tree in *Carmania*, by the cutting of the bark whereof there issueth forth a certain gum, which they take and preserve in a Goats skin; their use in War wherein the Soldiers were wont to lie all Winter, and therefore we read that *Claudius* the Emperour had given him thirty tents of Goats skins for his Soldiers attend upon the Judges, and the Mariners also by these defended themselves from the violence of storms upon the Sea: and so I leave this part of the beast, with remembrance of that which is written in holy Scripture, Heb. 11. that the people of God in ancient times did flee away from the rage of superstition, being apparelled, or rather meanly disguised in Goat skins, being charitably helped by the beasts, that were cruelly put to death by wretched men.

In the next place the milke of Goats cometh to be considered, for that also hath been, The milke of is, and will be of great account for Butter and Cheese, which the Writers call *Tyroparia*, Goats, and *Virgil* celebrateth the singular commendation both of the Wool and of the Milke, in these Verses;

Hæc quoque non cura nobis leviora tuenda,  
Nec minor usus erit, quamvis Miletia magno  
Vellera mutantur Tyrios incolæ rubores.  
Dusfur hinc soboles, hinc largi copia lactis;  
Quo magis exausso spumaverit ubere multura,  
Lata magis pressis manibus flumina matrem.  
Nec minus interea barbas, incanescunt mentia  
Cynipitî tandem bibe! etasque comates  
Usus in Castrorum: & misera velamina nautæ.

Therefore their Milk is profitable for Butter, although inferior to a Cows, yet equal to a Sheeps, and the herdsmen give their Goats salt before they be delivered of their young, for this maketh them to abound in milk. Others with Goats milk preferve their Wine from corruption by fowrenesse, first they put into their Wine the twentyeth part so much as is of the Wine, and so let it stand in the same vessell covered three or four dayes, afterward they turn it into a sweet and fresh vessel, and so it remaineth preserved from all annoyance of fowrenesse.

Cheeses made of Goats milk were wont to be called *Velabrenses Casti*, because although the *Romans* they were made at *Velabrum*, and that with smok, whereupon *Martial* made this Distichon;

Non quemcumque focum, nec fumum castus omnem,  
Sed Velabrensem qui bibit, ipse sapit.

*Aristotle* and *Julius Pollux* do commend the *Sicilian* Cheese, which was made of Sheep and Goats milke together, and by *Albani* it is called, *Casus Tromilioni*, and by *Simonides* *Stramilius*. In *Rhetia* of *Helvetia* there are excellent Cheeses made of Goats milke and Cow milke mixed together. The milke also of a Goat mixed to a Womans milke is best for the nourishment of man, because it is not too fat; yet *Galen* saith, if it be eaten without Hony, Water, and Salt, it curdieth in the belly of a man like a Cheese and strangeth him; and being so used it purgeth the belly: from thence came the fiction of the Poets, that *Jupiter* was nourished by a Goat, and that afterward in his War against the *Titanes* or *Giants*, he slew that Goat by the counsel of *Themis*, and wore her skin for an armor, and so having obtained victory, placed the Goat among the Stars, wherupon she was called *Aix Urania*, a heavenly Goat, and so *Germanicus Cæsar* made this Verse upon him, and *Jupiter* himself was called *Agiocbus*.

Ille pinatur  
Nutrix esse Jovis, si verò Jupiter infans  
Ubera Creteæ suavis fuisse Capre,  
Sydere qua claro gratum testatur alumnum.

Agiocbus.

The

Alberius.  
How Goats  
take breath.  
Varro.

Their quick  
sense of hear-  
ing.  
Horace.  
Alex. Mund.  
The use of  
their several  
parts.

Suidas.  
Varinus.

Bassus.

To increase  
Goats milke.  
Alberius.  
A secret in the  
milke of Goats  
Myresius.

Hermolaw.

Of the flesh of  
Goats.

The flesh of male Goats is not wholesome for mans body, but the flesh of a female in the Spring and Fall of the leaf, by reason of the good nourishment may be eaten without danger. They are worse then Bull-beef, because they are sharper in concoction and hotter, wherefore if they digest not well, they increase melancholy. The liver of a Goat being eaten, doth bring the Falling sickness, yet being salted a good space, and then fed with Vine-branches, or other such broad leaves, to keep them afinder, and some Wine poured into the Water when they almost fod, they become are very which and delicate meat; and therefore the *Albanians* praised the *Lacedaemonians*, that in their feast sweet they called *Copide*, they slew a Goat; and held it for a divine meat.

Also *Cimonachus* an *Academic* of *Carthage*, relateth of a certain *Tibiane* Champion, which excelled in strength all the Champions of his time, and that he did eat continually Goats flesh, for it is very strong, and remaineth a long season in the body, and doth much good being digested, notwithstanding the strong and rank smell thereof, otherwise it is dangerous, as is already said, therefore *Piera* having commended the *Kyd*, when he cometh to speak of the Goat he writeth thus:

*Cum male olet siccus, fit jam caper improbus, absti,  
Et cadat ante focos vilissima Baccho uos.*

But *Pliny* affirmeth, that if a male Goat eat Barley bread, or Parsneps washed, the same day that he is killed, then there is no poyson in his flesh: the stones of a Buck goat, resist concoction, and beget evil humors in the body: wherefore such a banquet is called in *Greek* (*Tragos Hiliberta*) for Goats after their copulation, have an evil flesh, not fat, but dry, and the remedy to make their flesh sweeter is to geld the male when he is young and tender, for so his temperature is amended by a cold and moist constitution.

Argemela.  
Albertus.

Tector.

The Inhabitants of *Portugal* eat Goats flesh, and account it delicate meat; especially such as dwell in the Mountains. In *Germany* they make of it a kinde of meat which is called *Kbhuusf*, and is prepared on this manner: they take a Goats heart newly taken out of the body, and slit it into small pieces, and break six Egges upon it, and the crums of white bread, seasoned with spices and Saffron, and so put into a bag, and sod or roasted: afterward they are served upon the table, and strewed over with Kitchen Sugar.

The guts being salted, are called (*Hilla*) which the *French* stuffe like puddings, and call them (*Souffisses*) from whence cometh our *English* Sawlidge, of this sewet and fat of Goats are the best candles made, because it is hard and not over liquid. The blood of a Goat hath an unspeakable property, for it scoureth rusty iron better then a file, it also softneth an Adamans stone, and that which no fire is able to melt, nor iron to break, being of such an invincible nature, that it contemneth all violent things, yet is it dissolved by the warm blood of a Goat. The Load-stone draweth iron, and the same being rubbed with garlick, dyeth and loseth that property, but being dipped again in Goats-blood, reviveth and recovereth the former nature.

Pliny.  
Hermolaus.  
Pausanias.

*Oppianus* prescribeth for a remedy of love, the urine of a Goat to be mingled with Spikenard, and so drunk by him which is overcome with that passion, assuring him thereby that they shall fall in as great loathing as ever before they were in loving. With the hoofs of a Goat they drive away Serpents, and also with the hairs by burning and perfuming them in the place where the Serpents lodge. With the horns of Goats they make bows; for in *Delos* there was dedicated the horn of a Goat, which was two cubits long and a span; and hereat ought no man to wonder, for that noble Bow of *Pandarus*, which *Homer* commendeth, was made of a horn of a female Goat.

Palladius.  
Archibachinet.

Varinus.

*Africanus* declareth, that in ancient time they made fruitful their Vine-yards by this means: they took three horns of a female Goat, and buried them in the earth with their points or tops downward, to the root of the Vine-stocks, leaving the hollow tops, standing a little out of the ground, and so when the rain descended, it filled the horns, and soaked to the root of the Vine, periwinding themselves thereby that they received no small advantage in their Grapes. The gall of a female Goat put into a vessel, and set in the earth, is said by *Albertus* to have a natural power to draw Goats unto it, as though they received great commodity thereby. Likewise, if you would have white hairs to grow in any part of a Horse; shave off the hair and anoint the place with a gall of a Goat, so shall you have your desire. The *Sabeans*, by reason of continual use of Myrrhe and Frankincense, grow to a loathing of that favour: for remedy of which annoyance, they perfume their houses by burning thorax in Goats-skins. And thus much for the several parts of a Goat.

There were in ancient time three kinde of Heard-kind which received dignity one above another; the first were called (*Bucolici*) Neat-heard, because they keep the greater Cattel: the second were (*Opiliones*) Shepherds, of their attendance upon Sheep: the third, last, and lowest kinde, were termed *Apoli*, and *Caprarii*, that is, Goat-heards, or Keepers of Goats, and such were the *Lacedaemonians*, who were called *Ozale*, because of their filthy smell, for they had the most part of their conversation among other Beasts.

A Goat-heard or Keeper of these Cattel must be sharp, stern, hard, laborious, patient, bold and cheerful, and such a one as can easily run over the Rocks through the Wildernesse, and among the bushes without fear or grief, so that he must not follow his flock like other heards, but go before them: they must also be light and nimble, to follow the wandering Goats, that run away from their fellows, and so bring them back again, for Goats are nimble, moveable, and inconstant, and therefore

therefore apt to depart away, except they be restrained by the herd and his Dog. Neither have Goats a Captain or Bell-bearer like unto Sheep, whom they follow, but every one is directed after his own will, and herein appeareth the pride of this Beast, that he scorneth to come behinde either Cattel, or Sheep, but always goeth before; and also in their own herds among themselves, the Buck goeth before the female for the reverence of his beard, (as *Ælianus* saith) the labour of the Goat-herd must be to see his Cattel well fed abroad in the day time, and well folded at night; the first rule therefore in this husbandry is to divide the flocks, and not to put any great number of them together, for herein they differ from Sheep, who love to live together in multitudes, as it were affecting society by which they thrive better, and mourn not so much as when they are alone: but Goats love singularity, and may well be called Schismatics among Cattel, and therefore they thrive best lying together in small numbers, otherwise in great flocks they are soon infected with the pestilence, and therefore in *France*, they care not to have *Magnus Greger*, sed plures: not great flocks, but many.

The number of their flock ought not to exceed fifty, whereupon *Varro* writeth this story of *Gaius* a *Roman* Knight, who had a field under the Suburbs containing a thousand Akers of pasture ground, who seeing a poor Goat-herd bring his Goats every day to the City, and received for their milk a penny a peece, he being led with covetousness, propounded to himself this gain, that if he stored his said field with a thousand Milch-female-goats, he also should receive for their milk a thousand pence a day; whereupon he added action to his intent, and filled his field with a thousand Goats, but the event fell out otherways then he expected: for in short time the multitude infected one another, and so he lost both milk and flesh: whereby it is apparent, that it is not safe to feed great flocks of these Cattel together.

In *India* in the Region *Catha*, the Inhabitants give their Milch-goats dried fishes to eat, but their ordinary food is leaves, tender branches, and boughs of trees, and also bushes or brambles; whereupon *Virgil* wrote in this manner:

*Placuntur vici sivea & summa Lycæi,  
Hortantisque rubos & amantes ardua dumos.*

They love to feed on the Mountains better then in the Vallies and green Fields; always striving to lick up the Ivie, or green plants, or to climb upon trees, cropping off with their teeth all manner wilde herbs, and if they be restrained and enclosed in fields, then they do the like to the plants that they finde there; wherefore there was an ancient law among the *Romans*, when a man let out his ground to farm, he should always condition and except with the Farmer that he should not breed any Goat in his ground, for their teeth are enemies to all tender plants: their teeth are also extia-ble to a tree, and *Pliny* and *Varro* affirm, that the Goat by licking the Olive-tree maketh it barren; for which cause in ancient time, a Goat was not sacrificed to *Minerva* to whom the Olive was sacred.

There is no creature that feedeth upon such diversity of meat as Goats, for which cause they are elegantly brought in by *Expilius* the old Poet, bragging of their belly cheer, wherein they number up above five and twenty several things, different in name, nature, and taste: and for this cause *Eustathius* defended by strong argument against *Dianius*, that men and cattel which feed upon divers things, have less health then those Beasts which eat one kinde of fruit alone. They love Tamerisk, Aldern, Elm-tree, Asfaraback, and a tree called *Alaternus*, which never beareth fruit but only leaves: also three-leaved-grass, Ivie, the herb *Lada*, which groweth now where but in *Arabia*, whereby it cometh to pals, that many times the hair of Goats is found in the gumb called *Ladagnum*, for the peoples greedy desire of the gumb, causeth them to wipe the juice from the Goats beard.

For the increase of milk in them, give them Cinquefoil five days together before they drink, or else bing, Dittany to their bellies, or (as *Lucanus* translateth the words out of *Avianus*) you may lay milk to their bellies, beside by rubbing it thereupon. The wilde Goats of *Cret*, eat *Dittany* aforesaid against the strokes of Darts: and *Strapion* avoucheth by the experience of *Galen*, that Goats by licking the leaves of Tamarisk, lose their gall; and likewise that he saw them licking Serpents which had newly lost their skins, and the event thereof was, that their age never turned or changed into whiteness on other external signs thereof.

Also it is delivered by good observation, that if they eat or drink out of vessels of Tamarisk, they shall never have any Spleen; if any one of them eat Sea-holly, the residue of the Rock stand still and will not go forward, till the meat be out of his mouth. The *Grammarians* say that *Chimæra* was killed by *Bellerophon* the son of *Glaucon*; in the Mountain *Lycius*, and the reason hereof is; that the Poets imagined *Chimæra* to be composed of a Lyon, a Dragon, and a Goat; and in that Mountain all those three were kept and fed: for in the top were Lybbs; in the middle were Goats; and also at the foot thereof Serpents: If they suffer heat or cold they are much endangered, for such is their nature, that they avoid all extremity, and the females with young are most of all molested with cold; if they have conceived in the Winter, then many Abortments or casting their young followeth.

In like sort it hapneth if they eat Walnuts (and not to their full) unripe; therefore either they must be suffered to eat of them to satiety, or else they are not to be permitted to them.

Aristotle.

Constantinus.

Ælianus.



Of the GOAT called by Pliny a DEER.



There is no man that shall see this Beast, but will easily yeeld unto my opinion, that it is a Goat, and not a Deer, the hair, beard, and whole proportion of body most evidently demonstrating so much, neither is there any difficulty herein, except for the horns which turn forward at the point, and not backward, which thing yet swarveth not so much from a Goat as from a Deer, and therefore can be no good reason to alter my opinion. There are of this kinde, as Doctor Cui affirmeth, in the Northern part of England, and that figure which is engraven at Rome in a Marble pillar, being a remembrance of some Triumph which Pliny setteth forth, differeth in no part from this Beasts description and proportion: Yet I take it that it may be brought into England from some other Nation, and so be seen in some Noble mans house, but that it should be bred there, I cannot finde any monument of authority, but I rather conjecture the same to be bred in Spain. Of these kindes there are three Epigrams in Martial, whereby is declared their mutual fights killing one another; their fear of Dogs, and their flesh desired both of men and beasts.

The first Epigram describing their wilful fight, one killing another, and so saving a labour to the Hunter, for they kill themselves to his hand, is thus;

Frontibus adversis molles concurrere damas  
Vidimus, & fassi sorte jacere pari.  
Spectare canes prædam stupuit; superbus  
Venator, cultro nil superesse suo.  
Unde leves animæ tantæ calere furor?  
Sic pugnant Tauri, sic cecidere viri.

The second Epigram is a Dialogue speaking to the Emperour, who took care to encrease his game, seeing not only men were enemies to them, but they also to one another; whereupon he writeth this diltichon;

Aspicis impelles tentem quam fortia damas  
Prelia, iam timida quanto sis ira feris.  
In mortem parvis concurrere frontibus audent  
Vix Cæsar damæ parere, mille canes.

The third Epigram is a complaint of their weak and unarmed state, having neither teeth like Bores, nor horns like Harts to defend themselves, but lie open to the violence of all their enemies:

Dente timemus Apes, destruant cornua cervorum  
Impelles damæ quid nisi præda sumus?

There are of a whitish yellow colour on the back, and are nourished sometime so: the pleasure, and sometime for the profit of their possessors, for they will suffer hunting like a Deer, and also be calmed for milk like a Goat. And hereof I finde no other especial mention among Authors, beside that which is already rehearsed.

Of the WILDE GOAT, and the Figure of the Helvetian, Alpine, WILDE or ROCK-GOAT.



Wild-goats are transfigured into many similitudes, and also dispersed into many Countries beyond the Seas and in the Alps, the picture of the Alpine wilde Goat is here set down. They are also to be found in Italy, in the Mountains of Fiesola and Trivica, in so much as the tame Goats which are nourished there, are said to be derived of these wilde Goats, these are called Cynthian Goats, because they are bred in the Mountains of Delos called Cynthus. There are of these which are found in the tops of the Libyan Mountains as great as Oxen, whose shoulders and legs abound with loose shaggy hair, their thins small, their faces are round, their eyes are hollow and hard to be seen.

Their horns crooking backward to their shoulders, not like other Goats, for they stand far distant one from another: and among all other Goats they are indued with a most singular dexterity of leaping, for they leap from one top to another, standing a great way asunder, and although many times they fall down upon the hard rocks, which are interposed betwixt the Mountains, yet receive they no harm: for such is the hardnes of their members, to resist that violence, and of their horns to break their falls, that they neither are offended thereby in head nor legs.

Such are the Goats of Sarcolum as Cato writeth, which leape from Rock to Rock, above three-score foot: of this kinde are those Goats before spoken of in the History of the tame Goat, which are thought to breath out of their ears, and not out of their nostrils, they are very swift and strong horned; the love betwixt the Dams and the Kids in this kinde, is most admirable; for the Dam doth most carefully educate and nourish her young; the young ones again, do most thankfully recompense their mothers carefulnes, much like unto reasonable men, which keep and nourish their own Parents in their old decrepit age, (which the love of God and nature doth enjoyn them) for satisfaction of their own education; so do these young wilde Goats, toward their own mothers: for in their age they gather their meat and bring it to them, and likewise they run to the rivers or watering places, and with their mouths suck up water, which they bring to quench the thirst of their Parents: and when as their bodies are rough and ugly to look upon, the young ones lick them over with their tongues, so making them smooth and neat.

And if at any time the Dam be taken by the Hunters, the young one doth not forsake her till he be also infamed: and you would think by the behaviour of the imprisoned Dam towards her young Kids, and likewise of the Kid towards his Dam, that they mutually contend one to give it self for the other: for the Dam foreseeing her young one to hover about her in the hands of her enemies, and continually to follow; with sighs and tears seemeth to with and periwade them to depart, and to save themselves by flight, as if they could lay in the language of men, *Fugite filii insillos venatores, ne me miseram capiti materno nomine private*; that is to say, Run away my sons, save your selves from these harmful and greedy Hunters, lest if you be taken with me, I be for ever deprived of the name of a mother. The young ones again on the other side wandering about their Mother, beat forth many a mournful song, leaping to the Hunters, and looking in their faces, with pitiful aspects, as if they said unto him; We adjure you (oh Hunters) by the Maker of us all, that you deliver our Mother from your thralldom, and instead of her take us her unhappy children, bend your hard hearts, fear the laws of God which forbidgeth innocents to be punished, and consider what reverence you owe to the old age of a mother; therefore again (we pray you) let our lives satisfy you for our Dams liberty. But poor creatures, when they see that nothing can















anoint them therewith; being heat with Vinegar, and put upon the sore, it cureth Tetters and Ring-worms, and disperleth Carbuncles in the belly: also being heated in Vinegar with Cow milk, Oyl of Cipress and Laurel, it purgeth and cureth all wounds of the legs and thins, it pulleth out thorns or sharp pricks out of the body, as that learned Physitian *Myrie* hath proved, as Sheeps dung also doth: laying it round about the wound, it cureth burnings and draweth out heat, with Oyl of Roses and Vinegar (as *Galien* writeth.)

It is also commended for broken joynts, because it suffereth them not to swell or start out, being once set, therefore it must be used with Honey and Wine, and it hath the same operation for broken ribs, for it openeth, draweth and healeth: also it being decocted with Vinegar, it healeth the pains in the nerves, although they be ready to rot, and easeth the pain in the joynts: the fime of a far in the nerves, Goat cureth the Gout, and the contraction or shrinking of the nerves, being dressed with Vinegar, and made as thick as Honey, it helpeth the trembling members. It is very dry, and therefore (*Armel* and *du* faith) it cureth the Fistula, making a plaister thereof with the meal of Beans, Wine and Leigh, which hath been seen wonderfully to dry up the Fistula. With Oxyment and Vinegar it cureth the *Alpitum*, but it must be burned.

Take seven bals of Goats dung, work them in Vinegar, then anoint your fore-head therewith, and it easeth the pain in the head, or else mingle it with Oyl of Roses, and spread it upon a cloth laying it to your temples, change it morning and evening, and you shall finde great ease thereby.

If the eyes be swoln at any time, binde this dung unto them: being mingled with liquid pitch and Honey, healeth them which are sick of the Quinsie; being gargarized in the mouth, he which is sick of an old Cough, let him take the dried trindles and put them into the best Wine, and drink it off, so shall he presently avoid his steam and filthy humor, and be healed.

#### The Remedies out of a Wilde Goat.

The same vertue which are in the Goats before spoken of, do also belong to the wilde Goats, the blood taketh away buncks in the flesh; and being mingled with Sea-palm, causeth the hair to fall off. An Ointment made of the fat of Goats, is profitable to them which have webs in their eyes; and the fat of Mountain Goats, helpeth infected Lights: His liver broiled upon coals and taken alone, helpeth the Fliz, but most certainly when it is dried and drunk in Wine: the gawl is good for many things; especially it is a Treacle against poyson, suffusions, whiteness and blindness of the eye, by anointing, it cureth the purblinde and the webs in the eye; and generally it hath the same properties in every part as the tame Goats before spoken of.

The like may be said of the Kids or young Goats, and first of all a Kid being slit asunder alive, and his warm flesh laid to a poysoned wound, doth most assuredly heal the same. Others take the warm flesh of Kids and perfume them with hair, by the favour whereof they drive away Serpents: the skin newly pulled off, and put upon the body beaten with stripes, taketh away their pain: others again use it against the Cramp and not without reason, for the tender skins of Lambs & Goats, being sprinkled or dipped in warm Oyl, giveth very much strength and paine to endure the Convulsion.

*Praxagora* prescribeth the flesh against the Falling evil; and by gargarizing the breath when it was sod, cureth the Quinsie and soreness of the throat. *Dometius* saith, that the brain being drawn through a gold ring, and given to a Hawk which hath the Falling sickness, it will work admirably upon her. The blood being dried and decocted with marrow, is good against all intoxicate passions, and being mingled with sharp Vinegar before it be congealed, it helpeth the spitting of blood: the same being eaten, cureth all kinde of Flizes, being taken three days together. *Galien* rehearseth in the Antidote of Urbane, among other things, the blood of Kids to draw the dead young ones out of the Dams belly.

With the fat there is an Ointment made with Rose water, to heal the fissures of the lips and nose, which is much desired of Women, not only for the before rehearsed vertue, but also because by anointing they keep by it their face from Sun-burning. The French and Italians call it (*Pomate*) because it smelleth like Apples, they put also into it Musk and Rose water, a pound of Kids sweat, and warm it in a Bath untill all be white, and so wash it with the said Rose water, and afterward repose it in a glass: The Ointment which is called (*Unguentum album*) is like unto it: the ashes of the thighs of a Kid, healeth burnings, and stancheth blood: the rennet is also commendable against Hemlock, or Toad-stool, and against all the poysonful strokes of Sea-beasts; being drunk in Wine, it stayeth bleeding, and refresheth excretions of blood; being taken with Vinegar it helpeth also the flux; being drunk fasting, it hath some operation to stay womens flowers. The lights of a Kid sod and eaten fasting, preserveth from drunkenness that day; and the powder of it burned, easeth the itching of the eyes; and peel'd eye-lids, if it be applied like *Sibium*: likewise the bladder of a female Kid drunk in powder, helpeth the incontinency of urine: the milk laid upon the spleen of an infant, asswageth the pain and tumors thereof; the liver is not fit for temperate men, but for weak cholerick men.

The Inhabitantes of the Mount *Atlas* do gather *Euforbium*, and corrupt it with Kids milk, but it is scorched by fire; for the good *Euforbium* being burned, yeeldeth an unacceptable flavour, and so we conclude this story with the two Emblems of *Alcitius*. One against them that take much pain, and make good beginnings, but evil ends, like a Goat which giveth a good mels of milk, and over-turgeth it with her foot:

*Quod sine egregias turpi maculeveris oris  
Innocentique tuum verticis officium,  
Fecisti quod Capra tui multararia latius  
Cum ferit, & propriis calce profundi oper.*

The other Emblem is upon a Goat, the which by her Keeper was constrained to give a young Wolf suck, who afterward notwithstanding that good turn, devourerth his Nurse: and it may be applyed unto them which nourish their own harms, and save a thief from the gallows.

*Capra lupum non sponte meo nunc ubere lacto,  
Quod male pastoris provida cura jubet:  
Creverit ille simul, mea me post ubere passit:  
Improbis nullo scilicet obsequio.*

There is a pretty comparifon of a Harlots love to a fisherman, which putteth upon him a Goats skin with the horns, to deceive the *Sargur*-fish, for that fish loveth a Goat above all other creatures, and therefore the fisher-man beguileth her with a false appearance, as the flattering love of Harlots doe simple mindes by fained protestations.

#### Of the GYLON.

THIS Beast was not known by the Ancients, but hath been since discovered in the Northern parts of the World, and because of the great voracity thereof, it is called (*Gulo*) that is, a devourer in imitation of the Germans, who call such devouring creatures *Vilvusi*, and the Swedians, *Gerfi*; in Lithuania and Muscovia, it is called *Rassomokel*. It *Mathias* is thought to be engendered by a Hyena and a Lioness, for in quality, it resembleneth a Hyena, and it is the same which is called (*Crocuta*): it is a devouring and unprofitable creature, having sharper teeth than other creatures. Some think it is derived of a Wolf and a Dog, for it is about the bigness of a Dog: it hath the face of a Cat, the body and tail of a Fox; being black of colour: his feet and nails be most sharp, his skin rusty, the hair very sharp, and it feedeth upon dead carcases.

When it hath found a dead carcass he eateth thereof so violently, that his belly standeth out like a bell, then he seeketh for some narrow passage betwixt two trees, and there draweth through his body, by pressing whereof, he driveth out the meat which he had eaten: and being so emptied returneth and devourerth as much as he did before, and goeth again and emptieth himself as in former manner, and so continueth eating and emptying till all be eaten. It may be that God hath ordained such a creature in those Countries, to express the abominable gluttony of the men of that Country, that they may know their true deformed nature, and livelyly figure, represented in this Monster-eating beast: for it is the fashion of the Noble men in those parts, to sit from noon till midnight, eating and drinking, and never rise from the table, but to disgorge their stomachs, or ease their bellies; and then return with refreshed appetites to ingurgitate, and consume more of Gods creatures: wherein they grow to such a height of beastliness, that they lose both sense and reason, and know no difference between head and tail. Such they are in Muscovia, in Lithuania, and most shameful of all in Tartaria.

These things are reported by *Olaus Magnus*, and *Mathias Nicolson*. But I would to God that this same (more then beastly intemperate gluttony) had beene circumscribed and confined within the limits of those unchristian or heretical apostatical countries, and had not spread it self and infected our more civil and Christian parts of the World: so should not Nobility, Society, Amity, good fellowship, neighbourhood, and honesty, be ever placed upon drynken or gluttonous companions: or any man be commended for bibbing and sucking in Wine and Beer like a Swine: When in the mean season no spark of grace, or Christianity, appeareth in them: which notwithstanding they









the proverb *Carpathius Leporem*, to signifie them which plow and sow their own miseries.

the proverb *Carpiamus Leporem*, to lignette cruelty with *the Fox* and other *fiarful Beasts* which are good for  
It fallth out by divine Providence, that *Hares* and other *fiarful Beasts* which are good for  
lymeat, shall multiply to greater numbers in *thorft* space, because they are naked and unarmed, ly-  
ing open to the violence of men and beasts, but the cruel and malignant creatures, which live only  
upon the devouring of their inferiours, as the *Lions*, *Wolves*, *Bears*, and *Bears*, conceive but very  
few, because there is less use for them in the world, and God in his creatures keepeth down the  
flood, because there is less use for them in the world, and God in his creatures keepeth down the  
cruel and ravenous, but advanceth the *simple*, *weak*, and *despised*: when the female hath littered  
her young ones, the first sheeth them with her tongue; and afterward sheeth out the male for  
conjoulation.

Hares seldom  
tamed.

An example of  
a game Halc.

Hares do seldom wax tame, and yet they are amongst them, which are neither. *Florida* nor *Fra*,  
tame nor wilde; but middle betwixt both; and *Cervidae* giveth this reason of their untamable nature,  
because they are persecuted that all men are their enemies. *Scoliger* writeth; that he saw a tame  
*Barye* in the Calfe of Mount-Pelz, who with her hinder legs would come and strike the Dogs of her  
own accord, as it were defying their force, and provoking them to follow her. Therefore for their  
misdeeds they may be tamed and accustomed to the hand of man, but they remain uncapable of all di-  
scipline, and ignorant of their teachers voyce, so as they can never be brought to be obedient to the  
call and command of their teacher, neither will goe nor come at his pleasure;  
and therefore being once set loose, they will run away, yet it is subtle, as may appear by

It is a simple creature, having no defence but to run away, yet it is subtle, as may appear by changing her form, and by scraping out her footpads when she leapt into her form, that so she may deceive her Hunters, also she keepeth not her young ones together in one litter, but layeth them a furlong one from another, that so she may not lose them all together, if peradventure men or beasts light upon them. Neither is she careful to feed her self alone, but also to be defended against her enemies, the Eagle, the Hawk, the Fox, and the Wolf, for she feareth all these naturally; neither can there be any peace made betwixt her and them, but the rather trutteth the scratching brambles, the solitary woods, the ditches and corners of rocks or hedges, the bodies of hollow trees, and such like places, then a dissembling peace with her adversaries.

*Ælianus.*

The subtilty  
of Hares.  
The defence of  
the Hare  
against her  
enemies.

*Albertus.*

The wilde Hawk when the takereth a Hare, the setteth one of her talons in the earth, and with the other hawking her prey, striving and wrrelling with the Beak untill she have pulled out his eyes, and then killeth him. The Foxes also compas the poor Hare by cunning, for in the night time when he falleth into her foot-lesps, he retraineth his breath, and holdeth in his favour, going forward by litle and litle, untill he finde the form of the Hare, and then thinking to surprize her, on a suddén leapeth at her to catch her; but the watchful Hare doth not take leep after a careles manner, delighting rather in suspection than security, when the perceriveth the appreaching of such a guest, (for the windeth him with her nostrils) and thinketh it better to go from home, than make leapt to her foe.

Wherefore the leapech out of her form and runneth away with all speed she can. The Fox also followeth, but a far off, and the hearing her adversary no more, beatecheth her self to rest again, under some bramble, or other bush, supposing that the ground the hath gotten shall never be recovered of her again: but the Proverbis old and true, Fair and softly goeth far; so the Fox which feldom getteth meat, but winneth it with his wit and his heels, followeth as fast as he can; for a slow, pace over-taketh the Hare at rest, which when the perceiveth, forth the goeth again, forsaking her quiet sleep, for the safe-guard of her life, and having gone so much ground as she did before, the beatecheth her to rest the second time, hoping that now the hath quit her self from her foe; but the Foxes belly hath no ears, and therefore hunger is to him like a thousand whips, or a whole kennel of Hounds, forcing him forward after his game.

*Ælianus.*

The Hare for her better sáfegard getteth up into some small tree, being sleepey and weary through the Foxes purfute; the Fox cometh to the tree and shaketh it by the roots, and will not suffer the Hare to take any reft, for he hopeth that time and travel will bring her to his dith; the leaps away again, and letteth no grafs grow under his feet, hoping that her heels fhall deliver her from the Foxes teeth: After follows the Fox, and at length (as the greater purfe over-weigheth the smaller, and the great Horfe of War over-weigheth the little hunting Nag.) Jo both the luty limbs of the Fox, out-left the weak legs of the Hare, and when he can go no more, needs muft her weaknes betray her to her foe, and fo was her fight and want of reft like a ficknes before her death, and the Foxes prefence like the voyce of a palling bell.

And on the contrary, all the labour of the Fox, like a gentle and kinde exercise for the preparing of his stomach to such a feast. The fit and least kinde of Wolves are also enemies to Hares, and the Weasell do craftily sport and play with the Hare until he have wearied him, and then hangeth fast upon her throat, and will not lose her hold, run the Hare never so fast, till at last through want of breath, and loss of blood, the falletteth into the hands of her cruel play-fellow, who with sport unto good earnest, and taketh nothing from her but her blood, leaving her carcase to be devoured by the hands of others, and in this manner is the fully Hare hunted by beasts: Now let us hear how the is hunted of men.

The hunting of  
larks.

It is before exprested, that every limb of a Hare is composd for celerity, and therefore she never travelth but jumpeth, her ears lead her the way in her chase, for with one of them shearkeneth to the voyce of the Dogs, and the other she stretcheth forth like a fail to haften her course, always stretching her hinder-feet beyond her former, and yet not hindering them at all; but sometimes when her ardent desire maketh her strain to fly from the Dogs, she falleth into the nets, for such

is the fate of the miserable, that while they run from one peril, they fall into another; according to the saying of holy Scripture, *Iha. 24. He that saileth out of the snare, shall fall into the ditch.* And this is to be noted, that if the Hare had the wit to run forthright, and never to turn, she could not be so easily over-taken; but because of her love to the place of her breed, there she is taken and loseth her life where she had her beginning: for the prefereth that place above all other for safety. Again some of the elder Hares, as soon as they hear the Dogs, fly to the tops of the high Mountains, for they more easily run up the hill, then down.

Wherefore the Hunter must studiously avoid that disadvantage, and keep her down in the vallies. In paths and high ways the runneth more speedily, wherefore they must be kept from that also. The Hares of the Mountains do oftentimes exercise themselves in the plain, and through practise grow acquainted with the neerest ways to their own lodging; so that if at any time the husbandmen set upon them in the fields, they dally with them till they seem to be almost taken, and then on a sudden take the neerest way to the Mountains, not suspected by the Hunters, and so take sanctuary in the unaccessable places, whither Dogs nor Horie dare ascend. For the Hares which we keep in the bushes are not able to endure labour, and not very swift (by reason of the pain in their feet) growing fast through idleness and discontinuance of running, they must be hunted on this fort: first of all they go through young woods and hedges, such as grow not very thick, for the thicker hedges they leap over, but when they come to many thick places that they must leap over, they quickly fall down and are tired.

The Dogs first of all go from them carelessly, because they cannot see them through the trees, but suffer them to run in the Woods following a far off by the scent, until at last they get the fight of her, and through their better exercise and skill, easily overtake her: but the campellier or Field-hare being leaner of body, and oftner chased, is taken with more difficulty, by reason of her singular agility, she therefore when she begins her course, leapeth up from the ground as if she flew; afterward passeth through brambles and thick bushes with all expedition; and if at any time she come into deep grals or corn she easily delivereth her self and lieth through it. And as it is said of the Lyons, that with their tails they stir up their strength and courage; so are the ears of this Beast like Angels wings, Ships sails, and rowing Oars, to help her in her fight; for when she runneth she bendeth them backward, and useth them in stead of sharp spurs to prick forward her dulneis, and in her course she taketh not one way, but maketh heads like labyrinths to circumvent and trouble the Dogs, that so the may go whither she will, always holding up one ear, and bending it at her pleasure to be the moderator of her chafe. Neither is this so unprovident or prodigal of her strength, as to spend it all in one course, but observeth the force of her persecutor, who if he be slow and sluggish, she is not profuse of her celerity, but only walketh gently before the Dogs, and yet safely from their clutches, reserving her greatest strength to her greatest necessity; for the knoweth that she can out-run the Dogs when she pleaseeth, and therefore it is a vain conceit to trouble her self more then she is urged. But if there be a Dog following her more swiftly then the residue, then she setteth forward with all the force she can, and when the hath left both Hunters and Dogs a great way behind her, she getteth to some little hill or rising of the earth, then she raiseth her self upon her hinder legs, like a Watch-man in his Tower, observing how far and near the enemy approacheth, and perceiving that she is delivered from perill of all danger, seemeth to deride the imbecility of their forces.

The younger Hares by reason of their weak members, tread heavier upon the earth than the elder, and therefore leave the greater favour behind them : and in ancient time, if the Hunters had taken a young Leverit, they let her go again in the honour of Diana. At a year old they run very swift, and their favour is stronger in the Woods than in the plain fields.

The Hare is followed by the foot and so decryfied, especially in soft grounds or high-ways, but if they go to the Rocks, to the Mountains, or to the hollow places, they are more uncertain, if they ly down upon the earth (as they love to do) in red fallow grounds they are easily decryfied.

When they are started in the plain fields they run far, but in the Woods they make short courses : If they hear the Dogs, they rail themselves on their legs and run from them ; but if fearful imagination oppresses them, as they oftentimes are very sad and melancholy, supposing to hear the noise of Dogs where there are none such stirring, then do they run to and fro, fearing and trembling, as if they were fallen mad.

Their footsteps in the Winter time are more apparent than in the Summer, because as the nights be longer, so they travel farther : neither do they smell in the Winter mornings so soon as it is day, until the frost and ice be thawed, but especially their footsteps are uncertain in the full Moon, for then they leap and play together, scattering and putting out the favour ; nor in the Spring time also when they do ingender. they confound one anothers footsteps by multitude.

They which will go forth to hunt or take pleasure in that pastime, must rise early, lest they be deprived of the smell of her footprints, so shall not the Dogs be able any way to find the Hare, nor the Hunters their game and pastime: for the nature of the footstep remaineth not long, but suddenly in a manner vaniseth away every hour. Again, they must fet the Hills and Rocks, the Rivers, and also the Brooks with nets and gins, thereby as it were stopping up the starting holes, paths, and ways, wherein the Hare for the most part trulleth, whether they be broad or narrow: The best time for the effecting and bringing hereof is after the Sun-rising, and not in twilight or break



Venerat facit, & lepus comestur,  
Ex quo continuum capis leporum.

The Emperour seeing those Verses, for Emperours have long ears and hands, made answer unto them as followeth;

Pulchrum quod putas esse vestrum regem  
Vulgaris (miserandi) de fabella,  
Sivernum putas esse, non traistor;  
Tantum in comedas velim lepusculos,  
Ut fac animi molle repulsi.  
Pulcher, ne invidas livore memis.

If any man finde fault with the Emperours Verses, Erasmus hath already answered the objection, that Kings and Emperours are not subject to laws of versifying; besides his answer was in Greek, and this but translated.

The Epithets  
of Hares.

Stories of  
monstrous  
Hares.

The eating of Hares procureth sleep, and thus much for the flesh and parts. The Epithets of a Hare expressing their natures are, Bared, trusting their feet, fearful, crafty, flying, raging, unhorned, little, crafty, tender, sharp-smelling, swift, whining, and wandering, besides many other Greek names. When Xerxes gathered his Army to go against Grecia, a Mare brought forth a Hare, which foretold that great Army should work to no strange effect. And another Mare of three years old brought forth an Hare, which spake as soon as it was littered, biting her mother with her teeth, and killing her, and while they looked upon her, sucking her dams blood, feathers grew out of her back in fashion of wings, which being done, the monster lifting up the voice, spake in this manner; *Fundite jam lacrymas & suspiria miseri mortales, ego hinc abeo*: that is to say, O ye wretched mortal men weep and sigh, I go away: at which words the flew away and was never seen more.

There were present at the sight hereof seven publick notaries, which called witnesses and made instruments thereupon, (as Antonius Bantius writeth in his Epistle to Petrus Toletus of Lyons in the year 1537. in December) whereunto the said Toletus made this answer, The dayes shall come (saith he) except the mercy of God prevent them, that children shall think they do obedience to their Parents if they put them to death.

They shall grieve because they were born, and say they are adulterate, as the Hare that was born of the Mare. Likewise it is reported by Lysander, that when the Carinians refused the conduct of the Lacedemonians, and the Lacedemonians besieging the City, fell to be very much afraid, and unwilling to scale the walls; while they stood in this amaze, suddenly a Hare leaped out of the town ditch; which thing when Lysander saw, he exhorted his Souldiers, laying, Be not afraid (O ye Spartans) of this sluggish and unexercised people, for you see they stir not out of the City, but suffer Hares to lodge under their walls; whereupon came the proverb (*Dormire lepore sub munitur*) Hares sleep under their walls, to signifie a slothfull, secure, sluggish, idle, and unthrifty people.

The Eagles of Norway lay their young ones in Hares skins, which themselves pull off. There is also a bird in Scythia, about the bigness of a Bustard, which bringeth forth two at a time, and keepeth them in a Hares skin which he hangeth upon a bough. Hares were dedicated to love, because (Xenophon saith) there is no man that seeth a Hare but he remembereth what he hath loved.

They say the City Botos of Laconia was builded by a sign of good fortune taken from a Hare, for when the Inhabitants were driven out of their Countrey they went to the Oracle to desire a place to dwell in, from whom they received answer, that Diana should shew them a dwelling place: they going out of their Countrey a Hare met with them, which they consented to follow, and there to build where the Hare should lodge, and they followed her to a Myrtle tree, where the Hare hid her self, in which place they builded their City; and ever afterwards retained with veneration a Myrtle tree. And thus I will conclude this moral discourse of Hares, with that Epigram of Martial made upon occasion of a Hare that in sport passed through the mouth and teeth of a tame Lion, saying that she was ambitious in offering her life to the Lions teeth in this wise:

Non facit ad avos cervix nisi prima leones,  
Quid fugis bos dentes, ambulo lepus?  
Scilicet a magnis ad te descendere turis,  
Ex quo un cervum frangere colla velint.  
Desperanda tibi est ingenium gloria fati:  
Non potes hoc tenuis praeda sub hoste mori.

The medicines  
of Hares,  
Pliny.

The powder of a Hare with oil of myrtle, driveth away pain in the head, and the same burned cureth the Cough: the powder thereof is good for the stone in the bladder: also the blond and sine of a Hare burnt in a raw pot to powder, afterwards drunk fasting with Wine and warm water,

it cureth the stone: and Serapion saith, he made triall of it by putting a spoonfull of the powder in to water, wherein was a sand stone, and the same stone did instantly melt and dissolve: so likewise a young Hare cut out of the same belly and burnt to powder, hath the same operation. A waftcoat made of Hares skins straighten the bodies of young and old: also the same dipped in Oil laid to the fore places of a Hares legs where the skin is off by over reaching, it often cureth the fore: the blood taken wash out of the body amendeth Sun burning, freckles, pimples, and many other faults in skin and face; which Celsus prescribeth to be done, first by washing the place many hours together, in the morning with the blood, and afterwards anointing it with oil: the same virtue is in the fat of Swans mingled with oil, according to the saying of Serapion:

Cygnos adipes bilis miscebo Lyes;  
Omne malum prope mediculosi est ole fugabit  
Sanguine vel leporis mibibus delibabit omnia.

It also cureth and taketh away the thick skin of the eye, it adorneth the skin, produceth hair in bald places, and easeth the Gout.

Oro cutim, producat pili, & salsus pinguis  
Sanguine si fuerint membra perunda meo.

It being fried, helpeth the Bloudy flux, Ulcers in the bowels, and old laskes, and taketh away the poison of an arrow; it being anointed upon a hot outward Ulcer, it ripeneth it: After a Bath, it cureth a great Leprosie by washing. The Rennet of a Hare rayeth looseness, the flesh is profitable for Ulcers in the bowels, it breaketh the stone being beaten, and being decocted like a Fox with the Gout and the shrinking up of the sinews. The fat with the flowers of Beans beaten together, draweth thorns out of the flesh: If a nail stick in the sole of the foot, beat together the fat of a Hare and a raw Sea-crab, then lay it to the place, and right against it upon the same foot lay also two or three Bean flowers, and let it lie a day and a night, and so it shall be cured: and the same draweth a poisoned Arrow out of a Hare: Andrus reporteth to Celsus, that he hath often heard that the liver of a Hare layed to the crown of a Womans head, expelleth her head-ache, and a dead child out of the womb. The powder made of this wool, or Hair, stauncheth bleeding, if the hairs be pulled off from a live Hare, and stopped into the nose.

The powder of the wool of a Hare buried, mingled with the Oil of Myrtle, the gall of a Bull, and Alum, warmed at the fire, and anoint it upon the head, fasteneth the hair from falling off: also the same powder decocted with hony, helpeth the pain in the bowels, although they be broken: being taken in a round ball, the quantity of a Bean together; but these medicines mult be used every day.

Arnoldus prescribeth the hair to be cut short, and so to be taken into the body against bursters: A perfume made of the dung and shaves of a Hare, and the fat of a Sea-calf, draweth forth Womens flowers. The seed of a wilde Cow-cumbe, and an Oyler shell burned, and put into Wine, mingled with the hair of a Hare, and wool of a Sheep, with the flower of Roses, cureth inflammations of Womens secretes after their child-birth: Also Hippocrates prescribeth the mell of a Cattle-fish to be beaten into Wine and layed in Sheeps wool and Hares hair, helpeth the falling down of the womb of a Woman with child. If a mans feet be scorched with cold, the powder of a Hares wool is a remedy for it. The head of a Hare burned and mingled with fat of Beare and Vinegar, cureth the hair to come where it is fallen off, and Galen saith that some have used the whole body of a Hare to be burned and mingled for the forehead cure, being layed in manner of a plaster.

By eating of Hares heads, the trembling of the Nerves and the bling of motion aid saith in the members receiveth singular remedy: These things also preserve teeth from falling: the powder of a Hares head burned with salt mingled together, rubbed upon the teeth, or if you will put ether altho the whitest Fennel, and the dried beans of a Cattle fish.

The Indians burn together the Hares head and Mice for this purpose: When ones mouth smelleth strong, this powder with Spickard, with which the smell. The brain is good against poison. The heart of a Hair hath in it a virtuous virtue also. The brain is proved to have power in it for comforting and repairing the memory. The same root and even helpeth trembling, which happeneth the accessions of sickness; such as one is with the cold shaking fit of an Ague. It is to be noted, that all trembling hath its original cause from the infirmity or weakness of the Nerves, as is apparent in old age, although the immediate causes may be some cold constitution, an abundance of cold humors, drinking of cold drink, and such like: all which tremblings are cured by eating the brain of a Hare roasted, (saith Dioscorides and Serapion.) It also helpeth children to breed teeth early, if the gums be rubbed therewith, for it hath the same power against inflammation, that honey and butter hath. Being drunk in Wine and the stones thereof rotted and eaten, it is good for him that hath any pain in his bladder, and if the Urine exceed ordinary for staying thereof, use the brain hereof to be drunk in wine.

The root of a Hare layed to that part where the teeth are, easeth them. Take the May with the dung in it, and wash it in old wine so as the dung may mingle therewith, and then give it to a sick of the Bloudy flux, and it shall cure him. The Rennet hath the same virtue that is in a Calves



Aristotle.  
Galen.

or Kids, and whereas *Niscander* praileth it in the first place, for the virtue it hath in it against poison, *Niscander* an ancient Physician giveth it the second place, for it is full of sharp digesting power, and therefore hath a drying quality. It dissolveth the congealed and coagulated milk in the belly, and also clotted blood within in the stomach more effectually then the Rennet of any other beast, being always the better for the age.

Discofides.

Being mingled with Vinegar, it is drunk against poison; and also if a Man or Beast be annoyed with it, no Serpent, Scorpion, Spider or wilde Moule, whose teeth are venomous will venture to sting the body so annoyed; or else inwardly take thereof three spoonfulls with Wine against the said bitings, or of any Sea-fish or Hemlock after the wound received; and with Vinegar it is sovereign against all poison of *Chamelen*, or the blood of Bulls.

Marcellus.

The same being drunk in Vinegar, or applied outwardly to womens breasts, disperfeth the coagulated milk in them; also being mingled with Snails, or any other shellfish, which feed upon green herbs or leaves, it draweth forth *Thornes*, *Darts*, *Arrows*, or *Reeds* out of the belly; or mingled with gum of *Frankincense*, *Oil*, *bird lime*, and *Bees-glew*, of each an equal quantity with Vinegar, it stancheth blood, and all illflux of blood flowing out of the belly; and it also ripeneth an old fore, according to the saying of *Serenus*;

*Si inducat leprosis aspersa conculca vino.*

Discofides.

Being layed to the Kings evil in Lint with Vinegar, it disperfeth and cureth it; also it healeth Cankers, it cureth a *Quartan Ague*, also mixed with Wine and drunk with Vinegar, against the Falling evil and the stone in the bladder: If it be mixed with *Sage* and Wine *Amy*, and infused into the ears, giveth help, as also the pain of the teeth. It dissolveth blood in the lighes, and causeth the pain of blood congealed in your stomach: when one spitteeth blood, if he drink *Samia* and Myrtle with the Rennet of a Hare, it shall give him very present ease.

The latter learned Physicians take a drink made of Vinegar and Water, and give it warm to effect and expell blood out of the Lighes; and if any drop thereof cleave in the bowels, then do they three or four times together iterate this potion, and after apply and minister all binding astrigent medicines and emplaisters, and for the Bloody flux it is good to be used: It is held also profitable by *Discofides* and other the ancients, that if the pap or breast of a Woman be annoyed therewith, it stayeth the sucking Infants looseness in the belly, or else given to the child with Wine, or (if she have an Ague) with Water.

There is, faith *Aristotle*, in the Rennet a fiery quality, but not in the highest degree, for as fire dissolveth and disperfeth, so doth this in milk dissolving the airy part from the watery, and the watery from the earthy: Wherefore when one tasteth an old Rennet, he shall think he tasteth an old putrified Cheese, but as leaven is to bread, which hardneth, joyneeth, and seasoneth the same, so is Rennet to Cheese; and therefore both of them have the same qualities of dissolving and binding: *Galen* affirmeth that he cures one of Gouty tumours and swellings, by applying the same to old and strong putrified Cheese beaten in a mortar, and mixed with the salted fat or leg of a Swine. If a Man sick of the Bloody flux drink thereof in a reev Egge two scruples for two dayes together fasting, it will procure him remedy.

For pacifying the Colick, drink the Rennet of a Hare; the same mingled with Goose grease, stayeth the incontinency of Urine, it also retaineth womens flowers. If it be drunk with Vinegar it helpeth the seconds, and being applied with Saffron and the juce of Leeks, driveth a dead child out of the womb. If it be drunk three or four dayes together after child's birth, it causeth barrenness. There are (faith *Pliny*) a kind of Wormes which being bound to Women before the Sun rising in a Harsh skin, cause them that they cannot conceive: this power is called *Alvion*.

*Mesurim* faith, that if a Woman drink this Rennet to her meat before she conceive with child, she should be delivered of a Male child; and such is the foolish opinion of them which affirm at this day, that if men eat parsley or white buds of black ivie, it maketh them unable to carnall copulation.

Aetius.

The Rennet of a Hare easeth and disperfeth all tumors and swellings in Womens breasts, the Lights of a Hare powdered with salt, with *Frankincense*, and white wine, helpeth him that is vexed with the Falling sickness, if he receive it thirty dayes together. *Serenus* ascribeth the same remedy to the Hare, and *Pliny* commendeth the Lights to heal the pain in the eyes. Being drunk in powder, it cureth the secrets. If the heels be troubled with Itches, they are healed with the fat of Bears, when if they be wring with a cold, they are healed with the duff of a Hares hair, or the powder of the Lights. Likewise when the foot is hurt with spurr shoes, it hath the same operation. The ancient *Physick* took the skin of an Ox in powder, with the Urine of Bayes, and sprinkled it on the soles of their feet, binding the heart of a Hare to the hands of him that hath a *Quartan Ague*; and some cure it by hanging the heart of a young Hare or Leveret to the neck or arme, in the beginning of the fit of him that is so visited. The heart of a Hare dried mixed with *Frankincense* or *Manna* or white wine drink thirty dayes together, cureth the Falling sickness.

Sextus.

For the pain in the belly take the same medicine, and drunk with warm water mingled with *Samia*, cureth the fluxes of women; also if a man that hath the flux at the Liver of a Hare dipped in sharp Vinegar it helpeth him if he be Liver sick; or if one have the Falling sickness, eat the quantity of an ounce thereof, and it helpeth him. The Gall of a Hare, the Heart, Lungs, Lights and Liver

of a Weasel, mixed together, three drams, one dram of *Castoreum*, four drams of Myrrha; a dram of Vinegar and Hony beat together, cureth him that hath a swimming or dizziness in his brain. The gall newly taken forth mingled with a like portion of hony, and warm in the skin of an onion, and *Galen* so put into the ear, giveth remedy to him that can hear nothing.

If he that is sick in the milt, that is, if it be over hard, swallow down the milt of a Hare not touching it with his teeth, or seeing it with his eyes, it cureth him. The belly of a Hare with the entrails ingited and burned in a frying-pan mixed with Oil, and anointed upon the head, restoreth decayed hairs. The reins of a Hare inveterated and drunk in Wine, expelleth the stone, and being sod, cut and dried in the Sun, helpeth the pain in the reins, if it be swallowed down and not touched with the teeth. The reins of a Hare, and of a Moor-hen, cureth them that are poisoned by Spiders, the stones of a Hare roasted and drunk in Wine, stayeth the incontinency of Urine. In the pain of the stones of a Hare roasted and drunk in Wine, they have the same operation. The secrets and stones of Hares are given to Men and Women to make them apter to copulation and conception, but this opinion hath no other ground beside the fecundity of the beast that beareth them. They which carry about with them the ankle bone of a Hare, shall never be pained in the belly (as *Pliny* faith) So likewise *Serenus* and *Marcellus*.

Take the ankle bone out of a live Hare, and hairs from her belly, therewithal make a threed and bind the said bone to him that hath the Colick, and it shall ease him. The said bone also beaten to powder is reckoned among the chief remedies against the stone. When Women have hard travel, put it into Cretick-wine with the liquor of Penroyal, and it procureth speedy delivery, being bound to the benumbed joynts of a mans leg bringeth great ease: so also do the feet being bruised and drunk in warm Wine, relieve the arteries and shortness of breath: and some believe that by the foot of a Hare cut off alive, the Gout is eased.

The time of a Hare cureth scorched members, and whereas it was no small honour to Virgins in ancient time, to have their breasts continually stand out, every one was prescribed to drink in Wine or such other things, nine grains of Hares dung: the same drunk in Wine in the evening stayeth Coughing in the night; in a potion of warm wine it is given to them that have the Bloody flux, likewise if a man be sick of the Colick, and drink three pieles thereof in sweet Wine, it procureth him much ease: being decocted with hony and eaten every day, the quantity of a Bean in desperate cases, mendeth Ruptures in the bowels.

*Astlepiades* in his medicine whereby he procured fruitfulness to Noble Women, he gave them four drams of Myrrha, two drams of Flower-deuce, two of Hares dung, confected with Collyrial water, &c. so put up into their bellies after ceasing of the flowers, before they lay with their Husbands. *Albertus* and *Raphael* prescribe this medicine to help a woman that wanteth milk in her breasts, *Crysal*, white Mustard-seed, and Hares dung put into broath made with Fennel.

## Of the HEDGE-HOG.

Forasmuch as there be two sorts of Hedge-hogs, one of the Sea, and another of the Land, our purpose in this place is only to discourse of the Land Hedge-hog, the Hebrews call him *Kipod*, which in the 14. of *Ila*. and *Zepha*. 2. is so translated by the *Septuagint*; although that some of the Hebrews would have it to signifie, a ravening bird, but seeing that I find the word *Kapaz* in most Hebrew dictionaries to signifie *Claudere* and *Contrahere*, and that is most proper to shut up and draw together, I do rather believe that the proper meaning thereof is a Hedge-hog, because this beast so draweth itself together, when it is in danger, as we shall hear more at large afterwards, according to the old Verle;

*Implicitumque sinu spinos corpore erem.*

The Arabians call him *Censud*, or *Cousud*; the *Caldeans*, *Caspeida*; the *Septuagint*, *Mugale*. *Silvaticus* calleth it *Agilium*, *Avion*, *Adulus*, and *Aliberbe* significeth a great Mountain Hedge-hog; the *Grecians*, *Cher*, and *Acantiboncor*, or *Echinus*, by reason of the prickles upon his back. The *Latines*, *Echinus*, *Erius*, *Ricinus*, *Heriz*, and *Erimaceus*; the *Italians*, *Riccio*, and *Rizzo*; the *Spaniards*, *Erizo*; the *Portingals*, *Orizo*, or *Oriza*, *Cace*, because of hiding themselves; the *French*, *Herisson*; the *German*, *Igel*; as in lower *Germany* in *Holland*, *En Tieren Vercken*; in *English* a Hedge-hog, or an *Urdoline*; by which name we call a Man that holdeth his neck in his bosome: the *Italians*, *Gefi*, *Malax*; and the *Illyrians*, *Axuviter*, *Zatho*, and *Oizibex*. So then for the entrance of our discourse, we take it for granted, that *Herimaceus* and *Echinus* signifie one thing, except one of them signifie that kinde which is like to a Hog, and the other that kinde which is like to a Dog, for they differ in place, or in habitation: some of them keep in the Mountains, and in the Woods or hollow trees, and other about Barnes and Houses: in the Summer time they keep neer Vineyards and Bushie places, and gather fruit, laying it up a-  
gainst Winter.

It is about the bigness of a Cony, but more like to a Hog, being beset and compassed all over with sharp thorny hairs, as well on the face as on the feet: and those sharp prickles are covered with a kind of soft moile, but when the is angered or gathereth her food she shrinketh them up by an admirable instinct of nature, as sharp as pins or needles: these are hair at the beginning, but afterwards grow

Of the kinds of  
Hedge-hogs.Their place of  
abode.

The quantity.



grow to be prickles, which is the less to be marvelled at, because there be Mice in Egypt (as Pliny saith) which have hair like Hedge-hogs. It hath none of these prickles on the belly, and therefore, when the skin is off, it is in all parts like a Hog.

Alentus.

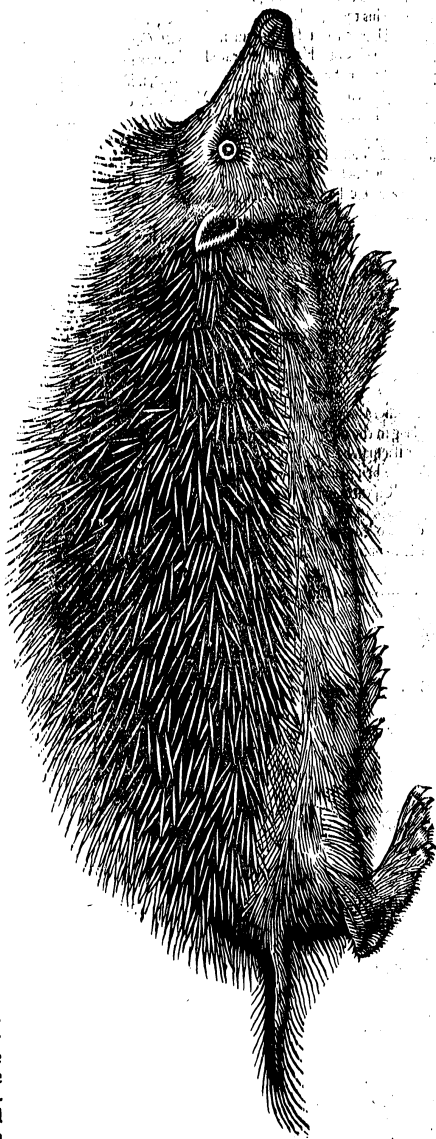
His bones are inward and cleave to his loins like as a birds, he hath two holes under his tail, to eject his excrements, which no creature living hath besides him. His meat is Apples, Worms, or Grapes; When he findeth apples or grapes on the earth, he rowleth himself upon them, untill he have filled all his prickles, and then carryeth them home to his den, never bearing above one in his mouth. And if it fortune that one of them fall off by the way, he likewise shaketh off all the residue, and walloweth upon them afresh, untill they be all fetted upon his back again, so forth he goeth, making a noise like a cart wheele. And if he have any young ones in his nest, they pull off his load wherewithal he is loaded, eating thereof what they please, and laying up the residue for the time to come.

When they are nourished at home in houses and brought up tame, they drink both milk and Wine: But there is an Herb (called *Potomigton*) whereof if they eat, they die presently.

Their copulation.

When they are in carnall copulation they stand upright, and are not joynd like other beasts, for they embrace one another, standing belly to belly: but the prickly thornes upon their backs will not suffer them to have copulation like Dogs or Swine, and for this cause they are a very little while in copulation, because they cannot stand long together upon their hinder legs. When the female is to bring

forth her young ones, and feeleth the natural pain of her delivery, she pricketh her own belly, to delay and put off her misery, to her further pain, whereupon came the proverb (as Erasmus saith) *Fchinus partum differt*, the Hedge-hog putteth off the littering of her young; which is also applyed against them which put off and defer those necessary works, which God and nature hath provided



them to undergo; as when a poor man deferreth the payment of his debt, untill the value and sum grow to be far more great then the principal.

The inward disposition of this beast, appeareth to be very crafty and full of subtlety, by this, because (Iycophon saith) that *Nauplim* had a cunning crooked wit, and was called by him a Hedge-hog. Their inward parts and disposition. When they hide themselves in their den, they have a natural understanding of the turning of the winde, South and North, and they that are nourished tame in houses, immediately before that change remove from one wall to another; the wilde ones have two holes in their cave, the one North, the other South, observing to stop the mouth against the winde, as the skillful mariner, to steer and turn the rudder or sails, for which occasion *Arifule* saith, that some have held opinion, that they do naturally foreknow the change of weather.

There is mortal hatred betwixt the Serpent and the Hedge-hog, the Serpent seeketh out the Hedge-hogs den, and falleth upon her to kill her, the Hedge-hog draweth it self up together, round like a foot-ball, so that nothing appeareth on her but her thorny prickles; whereat the Serpent biteth in vain, for the more he laboureth to annoy the Hedge-hog, the more she is wounded and harmeth herself, yet notwithstanding the height of her minde, and hate of her heart, doth not suffer her to let go her hold, till one or both parties be destroyed. The enemies to Hedge-hogs.

The Hedge-hog rowleth upon the Serpent piercing his skin and flesh, (yea many times tearing the flesh from the bones) whereby he scapeth alive, and killeth his adversary, carrying the flesh upon his spears, like an honorable banner won from his adversary in the field. The Wolf also is afraid of, and flieth from the Hedge-hog; and there is also a story of hatred between the Hare and the Hedge-hog, for it is said, that a Hare was seen to pluck off the prickles from the Hedge-hog, and leave her bald, pieled and naked, without any defence. The Fox is also an enemy to the poor Hedge-hog, and lyeth in wait to kill it, for the proverb is true, *Multa novit vulpes, Echinus vero unum magnum*; that is to say, the Fox knoweth many devises to help himself, but the Hedge-hog, knows, but one great one, for by rowling up her self (as before said) she opposeth the thornes of her back, against the Foxes teeth: which alone were sufficient to secure her from a greater adversary; but the wily Fox perceiveth that he can no where fasten his teeth without danger of himself, pisseth upon the Hedge-hogs face and poisoneth her: whereupon the poor beast is forced to lay open himself, and to take breath against the Foxes stinking excrement: which thing the Fox despising, loseth no opportunity, but presently teareth the Hedge-hog in pieces; thus the poor beast, avoyding the poison, falleth into the mouth of her enemy.

The manner of Hedge-hogs is, that whensoever they are hunted by Men, they draw up their legs and put down their head to the mossie part of their belly, so as nothing of them can be taken but their prickles: and perceiving that shift will not serve the turn, but their case growing desperate, they render out of their own bodies a certain urine hurtful to their skin and back, envying that any good thereby should ever come to mankind; and therefore seeing they naturally know the manifold uses of their own hides, here is the cunning of her hunting, to cause her first of all to render her urine, and afterward to take her, for the urine maketh the thornes of her back to fall off every day, and therefore they take this course for their last refuge. But in these cases the Hunters must pour upon the Hedge-hog warm water, for feeling warmth she presently unfolds her self, and lyeth open; which the Hunter must observe, and instantly take her by one of her hinder legs, so hanging her up till she be killed with famine; otherwise there cometh no benefit by her taking.

With the same skin flead off, brushes are made for garments, so that they complain ill which affirm, that there is no good or profitable condition coming to mankind by this beast. Again this is to be reserved and used for dressing of flax (as *Massarius* saith) and also it is set upon a *Calum*, javeline at the dore to drive away Dogs. In ancient time they did not eat the flesh of Hedge-hogs, but now a dayes men eat thereof, (of them which are of the swinish kind). When the skin is off their flesh, and their bodies, they scald it a little in Wine or Vinegar, afterward lard it and put it upon a spit, and there let it be roasted, and afterwards eaten, but if the head be not cut off at one blow, the flesh is not good.

The Epithets belonging to this beast are not many; it is called red, sharp, marine, volible, and rough, whereupon *Erasmus* said,

*Ex birce in levem nunquam mutabit Echinum.*

And thus much for the natural and moral parts of this beast. Now followeth the medicinal. Ten sprigs of Laurel, seven grains of Pepper, and of *Opopanax* as big as a Pease, the skin of the ribs of a Hedge-hog, dried and beaten cast into three cups of Water and warmed, so being drunk of one that hath the Colick, and let rest, he shall be in perfect health; but with this exception, that for a man it must be the membrane of a male Hedge-hog, and for a woman a female. The medicinal parts of Hedge-hogs.

The same membrane or the body of all Hedge-hogs burnt to ashes, hath power in it of cleansing, digesting, and detracting, and therefore it is used by Physicians for taking down of proud swelling wounds, and also for the cleansing of Ulcers and Boyles, but specially the powder of the skin hath that virtue, also it being roasted with the head, and afterwards beat unto powder and anointed on the head with hony, cureth the *Alopecia*.

*Marcellus.*

The same powder restoreth hair upon a wound: if it be mingled with Pitch, and if you add thereunto Beares greafe, it will restore unto a bald man his head of hair again, if the place be rubbed until it be ready to bleed. The same powder cureth the Pitsills, and some mingle red Snails with this dust, applying it in a plaister to Ruptures and Swellings in the cuds, and being mingled with oil by anointment, it taketh away the burles in the face, and being drunk in wine is a remedy against the pains of the reins or the water betwixt the skin and the flesh.

*Elianus.*

A fuffumigation made of a Hedge-hogs skin, under them that have their Urine stopped, by Gods help (faith my Author) the stopping shall be removed, if it proceed not from the fone, nor from an impotency. The flesh falted, dried, and beat to powder, and so drunk with fweet Vinegar, helpeth the pain in the reins, the beginning of Dropfies, Convulfions, and Leprofies, and all thofe affections which the *Grecians* call *Cachexie*. The Mountain Hedge-hog is better then the domeftical, having prickles like Needles points, but legs like to the other: the meat is of better tafte, and doth more help to the ftomach, foftning the belly, and provoking the Urine more effectually, and all this which is attributed to Hedge-hogs is much more powerful in the Porcupine.

*Marcelius.*

**Porcupine.** The Hedge-hog falted and eaten is good againt the Leprosie, the Cramp, and all sickness in the Nerves and Pustick and pain in the belly, rifing of windlines and difficulty of digestion : the powder annointed on Women, cureth him; and being eaten keepeth one from the Strangury; also being given to a mad Man, cureth him; and being eaten in the bladder, and is good againt the Quotidian Fever, and the drunk in wine, expelleth the stone in the bladder, and is good againt the flux of the bowels: If the fat with warm hitings of Serpents. The fat of a Hedge-hog layeth the flux of the bowels: If the fat with warm water and hony be gargarized, it amendeth a broken and hoarse voice; the left eye being fried with Oyl, yeldeth a liquor which causeth sleep, if it be infused into the ears with a quill. The gall with the brain of a Bat and the milk of a Dog, cureth the rains; likewise, the said gall doth not suffer uncomely hairs to grow again upon the eye-browes, where once they have been pulled up. It maketh also a good eye salve.

*Avicen.*

*Albericus.*

*Pinny.*

Warts of all sorts are likewise taken away by the same; the mild sod and eaten with meat, it healeth all pains in the milt, and the reins dried are good against a Leprosie or Pitsick coming by Ulcer, or the difficulty of Urine, the Bloody flux and the Cough. The dung of a Hedge-hog fresh, and *Sandaracha* with Vinegar and liquid pitch, being layed to the head, stayeth the falling away of the hair.

When a man is bitten with a mad Dog, or pricked with prickles of a Hedge-hog, his own Urine laid thereunto with a sponge or wool, is the best cure: or if the thornes stick in the wound of his foot, let him hold it in the warm Urine of a Man, and it shall easily shake them forth: and *Albertus* and *Rafus* affirm, that if the right eye of a Hedge-hog be fayed with the oil of *Alderne* or *Linseed*, and put in a vefel of red brasse, and afterward anoint his eyes therewith, as with an eye-salve, he shall see as well in the dark as in the light. And thus I will conclude this discourse with one story, that a Hedge-hog of the earth was dedicated to the good God among the foolish *Fugians*, and the water Hedge-hog to the evil, and that once in the City of *Phrygia* called *Azanium*, when a great famine troubled the inhabitants, and no sacrifice could remove it; one *Euphorbus* sacrificed a Hedge-hog, whereupon the famine removed, and he was made Priest, and the City was called *Tragani* upon the occasion of that sacrifice.

Of the *H O R S E*.

**W**Hen I consider the wonderful work of God in the creation of this Beast, enduing it with a singular body and a noble spirit, the principal whereof is a loving and dutiful inclination to the service of Man; wherein he never faileth in Peace nor War, being every way more near unto him for labour and travel: and therefore more dear (the food of man only excepted) we must needs account it the most noble and necessary creature of all four-footed Beasts, before whom no one for multitude and generality of good qualities is to be preferred, compared or equalled, whose commendations shall appear in the whole discourse following.

It is called in *Hebrew*, *Sus*, and a *Mare Susab*, the which word some derive from *Sis*, signifying Joy; the *Syrac* call it *Rexhs* and *Sowfar*; the *Arabians*, *Ranica*; and the *Caldens*, *Ramakun*, *Salsutha*; the *Arabians*, *Bogel*; the *Persians*, *Abaca*; the *Greeks*, *Hypos*; and at this day *Alomo*; the *Latins*, *Fagus*; and *Caballus*; the *Italians* and *Spaniards*, *Cavall*; the *French*, *Cheval*; the *German*, *Koffa*; the *Bohemians*, *Koff*; the *Illyrians*, *Kobyla*; the *Polonians*, *Konit*.

It is also profitable to consider the reason of some of these names, both in the Latin and Greek tongue; and first of all *Equus* seemeth to be derived, *Ab æqualitate*, from equality; because they were first used in Chariots and draughts, and were joyned together being of equal strength, legs and figure; *Caballus* seemeth to be derived from the Greek word *Caballer*, which was a common name for ordinary Hackney-horses, and Horses of carriage, whereupon Seneca commendeth *Marcum Cato*, that in his triumph of Conquering, *Uno Caballo contentum et non duo quidem, partem enim lævæ ab utroque lævæ dependentes occupabant*; that is to say, that he was contented with one Horse for his own saddle, and yet not totally one neither, for the packs that hang on either side of him, possessed the greaves



greatest part, and the true derivation of this word, seemeth to accord with *Coxe*, which signifyeth a manger, and *All* abundance, because riding Horses are more plentifully fed, and these Horses were also used for plowing, according to the saying of *Horace* ;

*Optat ephippia bos piger, optat arare Caballus.*

The Grecians call it *Hippos*, which seemes to be derived from standing upon his feet, and this beaſt only ſeemeth to be one of the number of them, which are called *Armenta*.

**Claudian.**

only feemeth to be one of the number of *Amphiphi*, and besides all *Histories* are filled with apppellative names of *Horfes*, fuch as thefe are, *Althor*, *Aetbon*, *Niditens*, and *Oreum*, the *Horfes* of *Phao*. *Aetba* a Mare of *Agamemnon* remembred by *Homer*. *Aetbon*, *Statio*, *Eous*, *Phlego*, *Pyro*; the *Horfes* of the Sun: *Lampus*, *Podargus*, *Xampus*, *Arno*, the *Horfes* of *Erymus*: by whole aid *Herculer* is faid to overcome *Ogyus*, the Son of *Mars*: *Balius*, *Xambus*, and *Padafus*, the *Horfes* of *Abdollar*. *Borilentes*, for whom *Adrianns* made a grave (as *Dion wrieth*) *Bromus*, *Cerus*, *Cabdon*, *Campafus*, *Cnafus*, *Covithe*, and *Herpinus*, two names of *Brittain* *Horfes* cited by *Metastafus* and *Gillius*. *Cylarus*, the Swift *Horse* of *Caftor*, *Dimos*, and *Pbodor*, the *Horfes* of *Mars*. *Eurithe*, *Glaucus*, and *Sithenus*, the *Horfes* of *Neptune*, *Paribenia*, and *Euripha*, Mares belonging to the Centaurs of *Hippodamia*, flain by *Oronotus*. *Harpe*, another Mare. *Phenix*, and *Corax*, the *Horfes* of *Elegheenes*. *Epidemius*, who wan the prizes in the fixty fixth *Olympiade* and caufed a ftatue to be made in *Olympus*. *Chidias*, *Horfe* and *Chariot* called *Pamareas*, and befide thefe, other *Centaurs* and *Sarmis*.

Alfo Pedarces, Rhazus, Strymon, Tagus, Theron, Thos, Valneri, which was a Horle of *Prasfinum*, and it is reported, that *Venus* the Emperor so much affected this Horle, that he not only caused him to be brought into his own Palace, and to have his meat always given in his preference, but made of him a picture with a manger, wherein were Grapes and Corn, from whence came the first Golden Horles or prizes of Chivalry;

Primus equum volucrem Massyli munera regia  
 Hand spernenda tulit : —————

Unto these may be added the affected names of Poets in love of their favorites, as *Rholandus, Vegetinus, Baiardus, the Horse of Rinaldus, Rubicanus of Argalis, Hippogryus of Rugerius, Frontinus* and *Fretatus of Sacrapan, and Rondellius of Oliverius.*

### The Epithets of Horses,

The Epithets that belong to Horfes, are either general or particular, the general may be rehearfed in this place, fuch as thefe are following: braffe-footed, continual, horn-footed, founding-footed, foming, bridle-bearer, neighing, maned, duntty, four-footed, fretting, faddle-bearing, watry, or fwearing, whole-footed, and many fuch others both among the *Greeks* and *Latins*, which howeever they may contain divers Allegories in them, and therefore may feem to be figuratively fed down, yet I thought good being of other opinion to reckon them in the beginning, that fo the Reader may confider, that I would be unwilling to omit any thing in this ftory, which might any way tend to the dignity of the fubject we intreat of, or the expreffing of his nature. Wherefore we will firft of all begin with the defcription of the natural parts of a good Horfe.

The natural  
outward and  
inward parts  
of Horses.

The hair of a Horse falleth off every year, the neather eye lid or brow hath no long hairs growing upon it, and therefore *Nicom* that famous painter of *Greece*, when he had most curiously limbed forth a Horses perfection, and faid in no part of nature of art, but only in placing hairs under his eye, for that only faul he received a disgracefull blame.

*Ælianus.*

that only fault he received a disgraceful blame.

The hair of the manes ought to be long, that part which growth betwixt the ears, upon the Temples, hanging down betwixt the eyes, the *Grecians* term *Procionem*, the *Latins*, *Caprina*, and in *English* it may be called a fore-top, which is granted to Horses not only for ornament sake, but also for necessity to defend their eyes. The Horses are naturally proud of these locks and manes, & may appear by those Manes which are kept for procreation of Mules, by copulation with Asses, which at the first despise to ingender with those shavelling and short haired Stallions. Wherefore their keepers shave off their manes, and their fore-tops, afterwards leading them to the waters, wherein while the Mares behold their own deformity, they grow so shamed, dejected, and discouraged, that ever after they admit with quietness the Asses to cover them. Therefore it is never good to cut the mane or the fetter-locks, except necessity require, for the mane and fore-top is an ornament to the neck and head, and the fetter-locks to the legs and feet: and he that keepeth Horses must as well regard to have them comely for outward grace, as strong and able for necessary labour. Many use to cut the necks of their riding Horses, even as they do of their drawing Horses, which thing although it may seem to be done for greater encrease, and farther growth of hair, yet is it unfeeling for an honest rider: some again cut it to fland compass like a bow, and many use the *American* fashion, cutting the Mane by rows, leaving some longer than other, as it were the battlements of a Church; but the best fashion of all is the *Persian* cut, whereby the one half of the thickness is cut away on the left side, and the other on the right side smoothly turned over and combed, according to the saying of *Virgil*:

*Densa juba & dextrojactata recumbit in armo.*

But if the Horfe be double maned, and so the hair fall half on the one side, and half on the other, then cut all the middle hairs away, and leave both the sides whole: for such was the intention of the Parbians. In a Colt or young foale, the hinder part is higher then the forepart, as he grows in years, so likewise the forepart groweth higher then the hinder.

This beast hath two bones in his head, and other two defending from his forehead to the Nostrils, two inferior Gumbes, or cheek-bones, forty teeth, that is to say, four and twenty grinders, four canine, and twelve biting teeth; there are seven cross ribs in his neck, and seven from his reins to his holt, his tail hath twelve commissures, and two *Ragula* in his fore-shoulders, from his shoulders to his legs other two, from his legs to his knees two more, in his knees there are two supporters, and from the shin to the Articles two more, there are sixteen small bones in the bottom of his hoof, and but one in his brest, in the inward parts there are six and twenty ribs, from the hinder parts to the top of his reins, the two grinding bones; and from them to the hinder part of the head there are two more, and two little ribs from the upper part of the thigh to the *Gamba*, and from thence to the hairs of the patterns, there are two; and the little ones to the hooves sixteen; so all the bones in number are accounted a hundred and seventy.

Now it followeth to declare the measure and number of the members: there are twelve steps or degrees in the roof of his mouth, his tongue is half a foot long, the upper lip hath twelve inches, the under lip five, every one of the cheeks ten: from the fore-lock to the Nollris he hath one foot in length, his two ears contain six inches, and his eyes four inches a piece. From his fore-lock to the *Mercurius*, there are contained eight inches, the back-bone containeth three and thirty crossle ribs. From the convulsion of the reins to the top of the tail, are twelve commissures, the length of his *Sagula* containeth also twelve inches, from his shoulders to his legs six, from his legs to his knees a foot in length, from the Aricles to the hoofs four inches, in his whole length six feet. And this is the stature of a courageous and middle Horie, for I know there are both bigger and lesser.

The quality and the measure of the nerves or sinews is this, from the middle nostrils through the head, neck and back-bone, is a double file or threed to the top of the tail, which containeth twelve foot in length. The two broad sinews in the neck do contain four-foot, from the shoulders to the knees, there are two sinews, from the knee to the bottom of the foot there are four sinews, in the fore-legs there are ten sinews, in the hinder-legs there are other ten sinews, from the reins to the fiones there are four sinews, so the whole number amounteth to thirty four. Consequently the number of the veins is to be declared. In the palat or roof of the mouth, there are two veins, under the eyes other two, in the brest other two, and in the legs other two, four under the palfernes, two in the ancles, four in the crown of the palfernes, four out of the thighs, two out of the loins, two out of the Gambeas, one out of the rail, and two in the womb or Matrix, so the whole number is nine and twenty.

There are certain veins above the eyes which are divided in Horses, wherein they are let blood, by making to them small incisions, the blood also is taken out of the veins, in the palate or roof of the mouth. There was an ancient custom of letting Horses blood upon Saint *Steven* day, by reason of many holy dayes one succeeding another, but that custom is now grown out of use. Also some take blood out of the Matrix veins, but that is not to be admitted in Geldings, because with their stones they lose a great part of their heat, excepting extreme necessity, but out of the palate blood may be let every month, and stallions when they are kept from Mares if the vein of their mouths be opened, fall into blindness, although it is no good part of husbandry to let them bleed that year, wherein they admit copulation, for the vacation of blood and feed, is a double charge to nature.

But the Organical vein of the neck, is the best letting of blood, both in stoned and gelded Horses. The later Leaches make incision in the great vein called *Femoralis*, and in *Inn Thymus* or *Jugula*. The eyes of a Horse are great or glasse, and it is reported by *Augustus*, that his eyes were much more bright then other mens, resembling Horses: these eyes see perfectly in the night, yet their colour varieth as it doth in Men, according to the caprine and glazie humour, And sometimes it falleth out, that one, and the same Horse hath two eyes of distinct colours. When the eyes of a Horse hang outward, he is called *Exophthalmos*. Such fair eyes are best for *Bucphalus* the Horse of *Alexander* had such eyes, but when the eyes hang inward, they are called *Calyph Thalmoi*, and *Celind*: the *Parthians* count them the best Horses, whose eyes are of divers colours, and are therefore called *Heteroph Thalmoi*, because the breed of that Horse was said to take the beginning from the *Parthians*, and the reason why the people loved not these Horses, was, because they were fearful, and apt to run away in wars.

The ears of a Horse, are tokens and notes of his stomach, as a tail is to a Lion, his teeth are changed, yet they grow close together like a mans. It is a hard thing for a Horse to have a good mouth, except his fallion teeth be pulled out, for when he is chafed or beated, he cannot be held back by his rider, but disdaine the bridle: wherefore after they be three year and a half old, those teeth ought to be pulled forth. In old age, a Horses teeth grow whiter, but in other creatures blacker.

A Mare hath two udders betwixt her thighs, yet bringeth forth but one at a time: many of the Mares have no paps at all, but only they which are like their Dams. In the heart of a Horse there

there is a little bone, like as in an Oxe, and a Mule; he hath no gall like Mules and Asles, and other whole-footed-beasts, howsoever (some say) it lyeth in his belly; and others, that it cleaveth to his liver, or to the gut-colon. The small guts of a Horse lie near that gut, that so one side of his belly may be free and full of passage; and from hence it cometh, that the best Horses, when they run or travel hard, have a noise or rumbling in their belly. The Hip-bone of a Horse is called by some the haunch, as the *Arabians* say; the tail (because therewith he drieth away flies) is called *Muscarium*, it ought to be long, and full of hairs. The legs are called *Gambe* of *Campo*, signifying treading; the hoofs of a Horse ought neither to be high nor very low, neither ought the Horse to rest upon his ankles, and those Horses which have straight bones in the Articles of their hinder knees, set hard on the ground, and weary the Riders; but where the bones are short in the same places, as they are in Dogs, there the Horse also breaketh, and woundeth one leg with another; and therefore such Horses are called *Cynopoda*. These hoofs ought to be hard and hollow, that the Beast may not be offended when he goeth upon stones; they ought not to be white, nor broad, but almost kept moist, that so they may travel the better, having strong feet, hard and found hoofs, for which, cause the *Greeks* call them *Eupodet*.

The Horses of  
divers Na-  
tions.

Oppianus.

Apollonius.  
Horses with  
horns and  
wings.

Ruellius.  
Abyrtus.

Vegetius.

Forasmuch as it is requisite for every man to provide him Horses of the best race, and their kinds are divers in most places of the world, so the couriers of Horses do many times beguile the simpler sort of buyers, by lying and deceitful affirmation of the wrong Countreys of the best Horses, which thing bringeth a confusion: for there are as many kinds of Horses as Nations. I will therefore declare severally the Countreys breeding the Horses, for the Region and air maketh in them much alteration, that so the Reader may in a short view see a muster of Horses made of all Nations. The Wilderness of *Acarnania*, and *Etolia* is fit for feeding Horses as *Tusculum*. The Horses of the *Greeks*, *Armenians*, and *Trojans* are fit for war, of the *Greeks* I will speak more afterward.

*Alexandria* was wont to take great delight in Horses, and combats of Horses: *Apollonius* writeth *Lib. 5. Ethiopia* (as it is reported) breedeth Horses having wings and horns. *Varro* commendeth the *Apulian* Horses, and *Volaterranus* writeth, that they and the Horses of *Roma* are most fit for war: he meaneth above all the Horses of *Italy*. There have been very fruitful pastures in *Arcadia* for cattle, especially for breeding Horses and Asles that are stallions, for the procreation of Mules, and the breed of the *Arcadian* Horses excelleth. The same man preferreth the Horses of *Thebais* and the *Greekish* Horses, for they are found of their feet and head, but not of comely buttocks; they have their back bone whole, great and short.

The latter two I might have referred to the whole body of the Horse. The Horses of *Armenia* are very necessary and convenient for war, for they and the *Capadocian* do breed of the *Parthian* Horses, saving their heads are somewhat bigger. Of the *Hackney* or common Horses I will say more afterward, where I touch the difference of Horses; and of their pace. The *Barbarian* Horses are the same as the *Lybian* Horses. *Vegetius* commendeth the Horses of *Torina* and *Burgundia*, after them of *Ponsul*. *Britain* breedeth little Horses and Amblers. Of Horses that are celebrate of the *Capitan* Mountain: See in the *Spanish*. The Horses of *Capadocia* and *Armenia* have the breed of the *Parthians*; but their heads are bigger, and are of a most famous Nobility; for that Countrey before any other land, is most commodious for the nourishing of Horses, according to the verses of *Nemesian*:

*Capadocumque notas referat gentis propago*  
*Armatæ, & palmas nuper græcis amictu acron;*

Strabo.

Suetonius.

The *Capadocians* do pay to the *Persians* every year, beside silver, a thousand and five hundred Horses, &c. The *Moder* have the double of these, and they sur-name the *Capadocians* Horses famous and swift; for he saith, that whiles these are young, they are accounted weak by reason of their young teeth, and their body feeding on milk; but the older they grow, so much the swifter they are, being very courageous, and apt for war and hunting, for they are not afraid of weapons, neither to encounter with wilde Beasts. *Mazaca* is a City of *Capadocia*; seated under the Mountain *Agenus*, now called *Cesarea*; *Eusebius* remembereth in his Chronicles, and from that City cometh the *Mazadocian* Horse, for the *Capadocian* Horse. And not only the Countrey, but the City it self sometime was called *Capadocia* from this City or walled Town. I suppose the Horses of *Mazaca* were so called, which *Oppianus* calleth *Mazacæ*, of these also and more. I will set down the verses of *Nemesian*.

*Sit tibi præterea semper, Maurus, telus*  
*Quem mittit, modo si gemelli sanguine firmus,*  
*Quemque coloratus Mæan deserto per arva*  
*Pavit, & assiduus docuit tolerare labores.*  
*Nepereat quod turpe caput, deformis & atrox*  
*Est illis, quodque inferens, quod liber utroque*  
*Quodque juba promissæ cervicis diverberet armo.*  
*Nam sciti facili, lascivæque collis secutus*  
*Pares in obsequium lenta moderamine bigæ.*

*Videri sunt præcipi fuge, sunt videri fuge*  
*Quin & promissi patulos per æquora campis*  
*Carissus acquirunt convincto sanguine pices*  
*Paucitumque dolores comites pice, virga repellunt*  
*Stans secus assisus Necti per carula semita*  
*Cum se totius præcipi fuge extollit ambo*  
*Horum: tardo ventumque facula torquet*  
*Hic etiam emittit vigor est juvenilis in ævo*  
*Nam glæciuntque sunt virtus bellæ fœdus adules*  
*Nam prius est animo quam corpore passus tulerat*

And

And peradventure *Nem fians* underflood certain Horses of *Lybia*, by the name of the *Mizacian* Horses, when as he joyns them with the *Mauritan* Horses, and calls them painted *Mazacian* Horses, which agreeeth not with *Capadocian*; writing also, that they are ruled with a stroke of air in stead of a bridle, which thing we have read in Authors writing of the *Massilian* Horses, in the Countrey of *Lybia*, and whereof we will speak when we discourse of the *Lybian* Horses. But the *Capadocian* Horses are swift and lusty in their old age, as it is related by *Oppianus*. Again, if *Mazacian* Horses be the same that the *Capadocian* are; what is the reason why *Oppianus* doth name them apt, unless peradventure every *Mazacian* Horse is a *Capadocian*, and not otherwise? The Horses of *Chalambria*, are so named of *Varrus*. A place in *Lybia*; the *Chaoian* Horses are the same with the *Apulian* Horses. The *Colophonians* dwell in a plain, as I have read in a certain *Greek* Author. *Strabo* *lib. 14.* writeth, that the *Colophonians* in times past did abound with Sea-forces, and have much excelled in Horse-men; that wherefoever in any Nation there was waged war, they hired and required the aid of the *Colophonian* Horse-men, and so it was made a common Proverb: *Colophonem addidit, Erasmus*. The Horses of *Crete* are commended by *Oppianus*, and elsewhere. From their loins upward they are as big as the *Cyrenian* Horses, with well leigh thighs, excellent for the soundness of their feet, and holding their breath a long time in riding, and therefore fit for single races or in Chariots.

The *Ægean* Horses are remembered of *Oppianus*, and the *Ægean* are a people of *Achaia*, and the *Strabo*. *Achaian* Horses are commended of the same. The *Lipidan* kinde of Horses is more excellent, and he preferreth the *Thessalian* Horses before those of *Epidauria*, but the *Epirotian* Horses are biting and stubborn: *Abyrtus* saith, that the *Epirotian* Horses, and the *Samerian* and *Dalmatian*, although they are stubborn and will not abide the bridle, and besides are base and contemptible, yet they are bold in war and combats, and therefore the *Epirotian* Horses and the *Sitalian* despite not, if their qualities and comely parts be apparent in them, although sometime he hath run away from the enemy, as the Poet saith:

*Quamvis, capto fuga versos ille egerit hostes,*  
*Et patria Epirum referat.*

*Epirus* and *Chonia*, is also a part of *Epirus* *Alpestrian*, although sometimes it be taken for the whole Countrey of *Epirus*. The Horses of *Chonia* are commended, as *Gratius* remembereth, writing of the *Sitalian* Horses, in these verses to this effect, that no-man hath presumed to strive with the *Chaoian*, and the *Achaian* hand doth not express their deserts.

*Ovis Chaoias contendere contra*  
*Ausit, vix merita, quas signat Achaia palma.*

There are people of *Arabia* called *Erembi*, which some call *Isothyrogens*, and *Trogolytans*. *Vegetius* *Oppianus*. in the third place commendeth the *Frygian* Horses for swiftness, and long continuance of course, after the *Humian*, *Burgundians*. The French Horse is the same that the *Menapians*, and *S. Hilarum* writeth, that worldly men are delighted with the French Geldings; but *Zacharias* As looked from his bands, rejoiceth good men. *Lucius Apuleius* hath commended the French Beasts, for if the young foal be derived of a generous kinde, it is an argument it will prove a Noble Beast.

The *Germanian* Horses are a kinde of base Horses, not fit for war; whether this name proceed of a strange Countrey, I have no certain knowledge thereof. There is a certain River in *Sicilia* called *Gelus*, of which Countrey the Horses are of great value and much set by. And also the *Geloni* are a people of *Synthia*, who in their sight fight upon Horses, of which *Lucanus* writeth to this effect;

*Massagetas quo fugit equo, forsque Geloni: And Virgil,*  
*Bisatæ quo more silent, æqueque Geloni,*  
*Cum fugit in Rhodopem, aut in desertæ Cætarum,*  
*Est laeo concetratum enim sanguine potat equino.*

Signifying thus much, that the *Massagetas* & valiant *Geloni* fly away upon Horses like the *Bisaltians*, when they fly into *Rhodope*, or into the Wilderness of the *Geloni*, and drink milk mixed with Horse-bloud for hunger and famine: But these fearful Horses are not meet for war. *Germania* hath greater Horses and hard trotters, whose pace is very hard and troublesome. The *German* Horses run most swiftly. The Horses of the *Greeks* have good sound broad feet, and of a great body; a comely fine head, their fore-part somewhat high of stature, straight and well compacted, and of a well fashioned body, but the joyning of their buttocks, not so agreeable and answerable to the rest: they are most swift and courageous, yet notwithstanding in all Greece the *Thessalian* Horses are most esteemed; *Nemesianus* writeth also of the *Greekish* Horses: Greece therefore yeeldeth choice Horses, and well hoofed. In *Holonia* the Horses are fitted, and very expert in war, and especially, the *African* Horses, which will last and continue a long time.

In *Spain* also the Horses are of a great stature of body, well proportioned and straight, having a fine head; the joyns of their bodies very well divided, set apart, and ready or flexible, simple and short buttocks, but not very strong and comely. They are strong and able to sustain the undergoing; or

Ælianus.

Abyrtus.





Abstrus.

Aliam.

In the Countrey of *Mauritania* are great store of Lyons, and of the *Naxos* we have spoke of before sufficiently. The *Median* Horses are of exceeding greatness, and the men of that Countrey are so bewitched with the rich attire and shape of their bodies, and also their Horses being so loose with superfluity or rankness, that the Horses take delight in their Masters, both in greatness and in fairness of body, and such costly furniture upon their backs, that they seem to perceive their own stature and comeliness. The *Medes* every year by way of custome pay three thousand Horses. *Heredotus* also calleth the *Nisean* Horses the *Medes*, whereof more shall be spoke afterwards. The *Menci* amongst our Countrey-men, the only men which I suppose were once call'd *French* of *Cela*, and the *Rugians*, (as Warriors) for the most part are in estimation. I also finde that the *Rugians* inhabited that Countrey which is now called *Rugeland*, and that *Paulus Diaconus* remembreth them lik. 1.

Touling the affairs of *Longobardus*, there are that say they departed into *Mechelburgia*. These are the right off-spring of the *Germans* (saith *Althamius*), they are counted as *Grmans*, both in language and vertue. *Gratius* writeth of the *Mareibians*, saying the *Mareibians* scarce yield their tough neck to the sword. *Virgili* also declareth *Mysen* to be a Countrey of most notable Horses; and *Gratius* commendeth a Horse fit for hunting highly in these verses:

Conspice Penes qualis persunditur amne  
Thessalum, aut patrie quem conspexere Mysenae  
Glaucum, nempe ingens, nempe ardua fundes, in aurae  
Crura, quae Eleas potior lastravit arenae?  
Ne tamen hoc attingas quis, iustantior illi  
Virtus, quam situm dumque loessere Martem.

The *Mysian* Horses were once great in estimation (as *Camerarius* writeth). Also the *Nasammanians* people of *Lybia*, living as spoylers of the Ships in the *Syris*. Of all these Horses before said, the *Nisean* Horse is the goodliest, and fittest to carry the body of a King, they are of a passing good shape, an easie pace, and very submissive to the bridle: having a little head, and a long and thick mane, with yellow or brown hairs hanging down on both sides: *Armenia* is very fit for feeding Horses, wherein is a certain meadow called *Hippobatus*, by which they make their journey which pass from *Perfia* and *Babylon* into the *Caspian* Border, in which place, they feed five hundred Mares which belong unto their King.

The *Nisean* Horses (written with *Jota* and simple *Sigma*, as *Eustathius* writeth) are the most excellent and best; some say that they have their generation from *Germany*, others out of *Armenia*, but they have a certain kinde of shape like the *Parthians*.

In *India* most of their living creatures are farger then in other places (except Horses) for the *Nisean* Horses, do exceed the *Indian* Horses, (as *Heredotus* writeth) in his seventh Book, describing the *Perfian* Horse. Behinde the spears (saith he) came ten Horses in most sumptuous furniture, which were *Niseans*, so called, because there is a great field named *Niseus* in the Countrey of *Media*, which yeeldeth Horses of a great stature: After these followed *Jupiters* Chariot drawn with eight Horses, after which *Xerxes* was carryed in a Chariot drawn by *Nisean* Horses, and by how much the greater the *Lybian* Elephant is then the *Nisean* Horse, so much the greater are the *Nisean* Horses then the *Indian* (as the same man saith) in his first Book: but the King was about to offer a white Horse, that is of the *Nisean* Horses, having a better mark as some expounded.

There are that say that *Niseus* is a plain of *Perfia*, where the most famous and notable Horses are bred. Some interpret it to the yellow *Nisean* Horse, because all the Horses of *Niseus* are of this colour. Between *Susmax* and *Badria*, there is a place which the *Greeks* call [*Nisor*] in which the most singular fine Horses are bred. There are also that suppose they are had from the red Sea, and all those to be of a yellow colour. *Heredotus* writing of *Niseus*, maketh it a part of *Media*. *Orpheus* also writeth, that there is a place in the red Sea called *Nisea*. *Stephanus* also maketh mention of [*Nisean* Plain] with the *Medes*, of which people the Horses are so called. *Calius Rhodiginus* reproved a certain man which translated the *Islands* Horses for the *Nisean* Horses. *Plutarch* saith that *Pyrus* had an apparition of a *Nisean* Horse armed and furnished with a Rider, that *Alexander* the Great was Captain thereof.

The *Medes* have Colts of a most noble kinde of Horses, which (as ancient Writers do teach us, and as we selves have seen) men when they begin the battel with a fierce encounter are wont to prance valiantly, which are called *Nisean* Horses.

Touling the *Paplagonians*, about the education of their Horses, fee more among the *Ventions*: The *Parthian* Horses are of a large body, courageous, of a gentle kinde, and most sound of their feet. Concerning those Horses which have but one eye, commended among the *Parthians*, and of those which are distinguished by diversity of colours, from those that come forth first, I have spoke already out of *Abstrus*. The *Armenian* and *Parthian* Horses are of a swifter pace then the *Sisilian*, and the *Iberi* swifter then the *Parthians*, whereof *Gratius* writeth to this effect:

Sicilicet & Parthia inter sua mollia rura  
Manfit bonor: ventat Caudini saxa Taburni,  
Garganumque truce, aut Ligurinus desuper Alpes,  
Ante opus excussis cadet unguibus; & tamen illi

Est animi

Est animi fingetque mens se natus in arces;  
Sed juxta vitium posuit Deus.

That is to say, among the *Parthians* there hath remained honour for their soft Countries; but let him come to the Rocks of *Candmur*, *Tabernus*, and too rough *Garganis*, or upon the *Ligurian Alps*, then he will quickly shake off his hoofs, and make a shew of great valiantness. The Horses of the *Celubrians* are somewhat white; and if they may be brought into *Spain* they change their colour. But the *Parthians* are alike, for they excel all others in nimbleness and dexterity of running: How the *Parthians* do make their pace easie in the trotters and hard footing Horses, after the manner of the *Geldings*, shall be declared afterwards, for *Perfia* preferreth these Horses above the censure of their pastimes as well to carry, (having an easie pace) and being of most excellent dignity: As for their pace it is thick and short, and he doth delight and lift up the Rider, being not instructed by art, but directeth it by nature.

Amongst these ambling Nags, (called of the *Latines* among the common sort of *Ta-narii*) their pace is indifferent, and whereas they are not alike, they are supposed to have something common from both; as it hath been proved: whereof *Vegetius* writeth in this manner.

In a short journey they have the more comeliness and grace in going, but when they travel far, they are impatient, stubborn, and unless they be tamed, will be stubborn against the Rider; and that which is a more greater marvel, when they are chafed, they are of a delightful comeliness, their neck turneth in manner of a Bow, that it seemeth to ly on their breast. The *Pharlatan* Mares evermore bring Foals very like their Syre, and therefore very well so named, *Eque probe*. We read of the *Phasian* Horses which receive their name (from the mark or brand of a bird so named) or else because of their excellent beauty and comeliness.

The *Rosian* Horses, Varro so nameth of *Rosae*, which *Volaterranus* writeth to be most fit for War: *Calius*: and this *Rosae*, otherwise *Rosae*, *Festus* saith, that it is a Countrey in the coasts of the *Reatians*, so called, because the fields are said to be moist with that dew. The Horses of *Sace*, if they happen to throw down their Rider, they forthwith stand still, that they may get up again. *Vegetius* hath commended the *Perfian* Horses saith, that the *Armenians* and *Sapburi* do follow next. *Armenia*: *Saphuria* verily is an Island in the *Araban* coast, and the people of *Saphuria* ly beside *Pomus*. The Horses of *Epirus*, *Salmarica*, and *Dalmatia*, although they will not abide to be bridled, yet they shew that they are warlike by their legs.

The *Sardinian* Horses are nimble and fair, but lesser then others. The *Sarmatian* kind of Horses is feat and well fashioned in this kind, very fit for running, unmixt, having a well set body, a strong head, and a comely neck. Some Horses they call *Aetogens*, from a certain mark which they have in their shoulders and colour, which the *Sarmatians* do take unto themselves as very good, with which they do contend about their cruelty, wherefore they employ them in warlike out-rides, but those that bear the Eagles mark in their buttocks and tail, they are disallowed of them; and they report that they mark them so, because they will not use them, by reason lest they should quickly be destroyed or run into some trouble.

The *Sarmatians* when they intend any long journeys, the day before they keep them fasting, giving *Pliny*: them a little drink, and so they will ride them a hundred and fifty miles continually going. These Horses are very fit for War, and many of them are found gelded in their tender age, and they say they never lose their teeth. It is a custome of *Scythia* and *Sarmatia* to geld their Horses to make them more gentle: they are swift, little, and fierce, but very stubborn and untamed; neither doth *Cirey*, (situate near *Sicilia*) breed Horses inferior to the *Spanish*, as *Vegetius* writeth. The *Epirotan* and *Sicilian* Horses are not to be despised, if they were well bred and educated, they want not comeliness and good qualities.

The *Sicilian* Horses are most swift. *Lilybaeum* is a promontory of *Sicilia* lying towards *Lybia*, which a certain verse maketh more plain: but as I understand it is the Three-clit-top-mountain *Etna*, which casteth forth fire, and covereth the carcase of *Enceladus* the Giant, lying there under (whereof *Oppianus* writeth) and some others also. But (saith he) the *Armenians* and *Parthians*, have swifter couriers by far, then the *Sicilians*. Now, let us hear *Gratius* himself, discoursing of the *Sicilian* Horses, as well as of the *Lybian*.

Sic & Strymonio facilis iuvula. Bifalte,  
Possent Etnae vinam se ferro per arces.  
Qui ludus Siculis: quid tum fit turpia colla,  
Antennis dorso curvatur spina? per illos  
Camalus Graius Agreus, vicique fragorem  
Ne broda liquere sera. O quoniam in armis  
Ille meli, cujus dociles pecunariae fatus  
Sufficient, quos Chaonios contendere contra  
Ausit, vix merita quae signat Achaea palma.

But as for *Gratius*, I suspect the place to be imperfect; for *Agreus* is a Mountain of *Sicilia*, having a Town situate in the top of it, bearing the same name, where their Ancestors were wont to nourish and bring up the best Horses. There is also in *Sicilia* a Mountain called *Nebroda*, which some think to be so called by reason of the plenty of Dear, but they have no Author for it, and



as for the printed Book of *Gratius*, I finde it expresseth it not so well as *Virgil* setteth it down, saying, that *Agreus* was a breeder of most courageous and notable Horses: but yet *Serius* saith, (according to *indarus*) that the *Agremines* in times past sent their Horses to the jutting or combats of *Graia*, returning with victory from thence, and we have also read, that in *Cappadocia* whole troops of Horses have been destroyed. The men of *Delphos* by the answer of *Apello* got herds and great store of Horses from *Agremina*, and those were excellent. *Aristophanes* calleth those great *Azina* Horses (*Canthari*) either of the greatnels of the Mountain, or else great *Canthari* are bred in it, or of the Horses of *Azina*, being notable for swiftness and running. The Horses that are bred in *Gret* and *Cappadocia* are also most excellent.

Strabo.

In *Greece* there are most notable Horses of *Theffalia*, which *Abyrtus* saith be the best in all *Greece*. The words of *Gratius* the Poet speaking of the *Theffalian* Horses are before recited. The Mares of *Aumetus* were the most excellent, but as *Homer* reporteth the *Theffalian* were before them. The Solitude or Wilderness of *Arcanum* is as commodious to feed Horses, as *Theffalia*. It is certain that *Theffalia* excels with Horses, from whence *Xerxes* is said to have made a combat, that he might try his Horses there where he understood the best breed of *Greekish* Horses to be, and from whence this proverb arose, *Discernatur equa Theffalia* (viz.) let the *Theffalian* Mare be tryed by battail, a proverb of excellent worth, because in old time the chiefest praise was of the *Theffalian* Mares: which is very apparent by the Oracle that was delivered to the *Aeginensians*. *Suidas* relateth (but I know not out of what Author) that *Theffalia* hath excellent Horsemen; *Thracia* expert shooters; and *India* light armour: so hath likewise *Gret* and *Caria*.

*Kraffius* writeth; that *Theffalia* is most fit to feed Horses, who do far excel the *Arcadians* and *Epidauras*, as *Strabo* witnesseth, lib. 8. *Cesar* was said (when he was Dictator) to have made the first them among the *Romans* of the Horses, fighting against Buls, and killing them, whereof *Lucanus* writeth thus:

*Theffalium sonipes bellis feratilibus onem.*

Textus.

That is to say, the *Theffalian* Horse is profitable for fence and deadly conflicts. There is also in *Theffalia* a City (named *Pella*) from whence I deem the *Pelleian* Horses are so called of *Gratius*, yet there be other places called *Pella* (as *Macedonia* and *Achaia*) whereof *Gratius* writeth thus:

*Spadices via Pellet valuerat Cerauni,  
Et tibi devote magnam pecunaria Cyrrha  
Phaebe decus nostras agere in sacra iussas.*

Which (*Cerauni*) are Mounts of *Epirus*, and *Cyrrha* is a Town of *Phocia*, situate at the foot of the hill *Parnassus*, where *Apello* *Cyrrhaeus* was worshipped. The *Tyrtheans* being excellent warriors, are commended of *Oppianus*. Out of the Islands of the *Tyrrhenian* Sea (especially *Corsica* and *Sardinia*) there be very short Horses, but they are of good courage, and gentle withal.

Volaterran.

The *Thracian* Horses are foul and ill shapen, being rough all over their bodies, and having very great shoulders, which in the *Greek* is named (*Calomysen*) such a one as will cast down the rider on the ground from off his back, they are crook-backe, or bunched out; or else of divers kinds; and therefore they have an unsure and reeling pace, and their course is very unconstant. *Abyrtus* saith the *Thracian* Horses are the best. The *Thuringian* Horses are neighbours to *Hessi*, which *Pliny* and *Volaterranus* supposed, are called (*Mediterranean Cimbrici*.)

There be some that suppose the *Venetians* to descend from a people of *Paphlagonia* (called *Vmetani*) which after the destruction of *Troy* came to these places, and by these they make an argument, conjecturing it to be good, in regard they are wholly employed about breeding Horses, which at this time faileth altogether, but in former days they were very careful to follow their business about the training up of young Mules, whereof *Homer* writeth. And *Dionysius* the Tyrant of *Sicilia* ordained, that the breed of Horses should be fetcht from hence to make warlike combats with them: that among the *Graecians* the excellency of the *Venetian* breed should remain; and that a great while after that breed of Horses got the praise. *Vuallachus* this day is called of the *Saxoni* a gelded Horse, and brought out of that Country, which sometimes was called *Dacia*. The *Lycofians* and *Lycofianians* shall be spoken of hereafter.

### Of the choice of good Horses.

The members of an eligible Horse.

*Palladius* advieth to observe four things in choice of a Stallion Horse, the form or outward proportion, the colour, the merit, and the beauty, all which are necessary to be observed in the choice of Colts or elder Horses, that they may be of a generous race, having soft legs, lofty paces, gently treading, such as will lead the way, and be not afraid of any water, bridge, or sudden noises; having a gentle neck, a sharp head, a short belly, a fat back, a dapple colour, nimble ears, thick mane lying on the right side, a double bone descending by his loins, a sounding hoof, and legs that cannot stand still, which *Virgil* expresseth in these words:

*Nec non & pectori est idem detectus equinus.  
Turbo, quos in specu statim summittere gentis,  
Præcipuum jam inde a vobis impende laborem.  
Contingit pecoris gentis pulvis in arvis.  
Affluatque dextera, & multa crura repant.  
Primus & ite vlam: & fluos tentare minores  
Audet, & ignoto sese committere ponti  
Nec vanos horret crepitus, illa ardua cervix,  
Attingitque caput, hec est virtus, obsequio terga:  
Luxuriantque toris animosum pectus, bonissi  
Spadices glaucique: color deterrimus atrox  
Et gibus: ita, si qua sinum proci armis didere,  
Stans hec desist, micat auribus: & timidi viris:  
Colledumque premens vobis sub naribus ignem.  
Dens, juba, & dextro juba recumbit in armis.  
At duplex agitur per lumbos spina, cavatque  
Tellurem, & solida graniter sonat angula coram.*

*Varro* sheweth that at the first foaling of a Colt a man may observe by certain signs how he will prove when he is in perfection: for if he be cheerful, bold, and not terrified at any strange sight, if he run before the company, be wanton, and contend with his equals in course, and over-run them: if he leap over a ditch, go over a bridge, or through water, and being provoked appeareth meek; these are the most true signs of an eligible Colt.

Also it is to be considered, whether they rise quickly, being stirred from their rest, and run away speedily, if their bodies be great, long, full of muscles, and sharp having a little head, black eyes, open and wide nostrils, sharp pricked ears, a soft and broad neck, not long, a thick mane curled, and falling on the right side, a broad and full breast, large shoulders, and shoulder-bones, round ribs, a little belly, a double back-bone, or at the least not thin, bunched and extended; his loins pressed downwards, broad, and well set, little and small stones, a long tail; with curled hair; high, straight and equal legs, round knees, not great, nor bending inward; round buttocks, brawny and fleshy thighs, high, hard, hollow, and round hoofs, well set to the crown of their pattern, having veins conspicuous and apparent over all his body. That Colt which at the time of his foaling hath the most highest legs, is likelest by common reason to prove most able and noble in his age, for of all the joyns in the body the knees and legs grow least, and they which have flexible joyns in their infancy, will be more nimble and flexible in their age. And thus much for the parts of a Colt. Now, in the next place we must likewise take consideration of a Horse untamed, and ready for the saddle. For the outward parts of his body, saith *Xenophon*, yeeld evident signification of his minde, before he be backed.

Plow willett that the state of his body be straight, and articulate, his head bony, his cheeks little, his eyes standing out, and not sunk into his head, flaming like bloud, looking cruelly if the body be black; but black eyes if the body be white, do argue a gentler and better disposition; short and little ear, the crown of his head greater then the residue, broad nostrils, whereby he not only looketh more terribly, but breatheth more easily; for when one Horse is angry with another, in their rage they are wont to stretch out their nostrils vehemently.

The beak or snout of a Horse, ought not to stand out like a Swines, but to bend down a little crooked, the head to be so joyned to the neck, as it may bend more commodiously, that is, if the neck be small next to the head, so will the neck stand before the rider, and his eyes appear before his feet: and although he be full of stomach, yet will he never be violent or stiff-necked. It ought also to be considered, whether his cheek bones be sharp, tender, or unequal, standing one above another, for their imparity maketh the Horses neck to be hard and stubborn.

The back-bone above his shoulders higher, commodious to set the saddle upon, and his whole body the better compacted, if the back-bone be double, and smooth; for then shall the Rider sit more easily, and the form of the Horse appear more delectable. A large breast sheweth his comeliness and strength, making him fit to take longer reaches without doubling of his legs, because in a broad breast the legs stand further asunder: large side or ribs swelling out above the belly, for they shew the ability of the Horse both to his food and work, a round even belly, and his loins being broad and short, causeth the fore-legs to be lifted up more easily, and the hinder-legs to follow; for the small loins do not only deform, but enfeeble and oppress the Horse, therefore the loins ought to be double, the ribs broad and fleshy, agreeable to the breast and sides, buttocks solid and broad, with a long tail reaching down to the heels of his hinder-legs. Thighs full of sinews, the bones of his legs thick like posts of the whole body, but that thickness ought neither to be of veins nor flesh, for then they are quickly inflamed and wounded, when they travel in rough and sharp ways: for if the flesh be cut a little, the commissures part asunder, and causeth the Horse to halt, and above all other things have a regard to his feet, and therein especially to his hoof, for being thick, it is better then being thin, likewise if they be hard, causeth the pattern to stand higher from the ground, for so in their pace the soft and hard parts of the foot do equally sustain

Signs to chuse a good Colt.

Columella.

Varro.

Alberius.

Of the chaise

of a Horse un-

backed or never ridden.

sustain one another, and the hard hoof yeeldeth a sound like a Cymbal, for the goodness of a Horse appeareth by the sound of his feet.

Now on the contrary side it is good also to see the shape and signs of reprobation in Horses, and first of all therefore, a great and fleshy head, great ears, narrow nostrils, hollow eyes, a long neck, a mane not hairy, a narrow breast, hollow shoulders, narrow sides, and little fleshy sharp loins, bare ribs, hard and heavy legs, knees not apt to bend, weak thighs, not strong, crooked legs, thin, full fleshy, plain and low hoof, all these things are to be avoided in the choice of your Horse.

### Of the choice of Stallions and breeding of Mares.

Now in the next place, let us consider the choice of Horses and Mares appointed for breed and procreation, and we have shewed already, that in a Stallion we are principally to consider the colour, form, merit, and beauty: This Stallion is called in Italy, *Rocame*; in France, *Etalain*; in Germany, *Ein Springhengst*; and in Latine, *Admiratus*, quia ad quendam foblem admittitur, because he is sent to beget and engender. The *Cracian*, *Anabati*, or *Ochone*, is that of all therefore, to begin with the colour: that Horse is best which is of one continued colour, although oftentimes (as *Rufus* saith) Horses of a despicable colour prove as noble as any other.

Of the colour.

*Varinus.*

The chief colours are these, bay, white, carnation, golden, russet, mouse-colour, flea-bitten, spotted, pale and black: of all these the black or bay is to be preferred. *Opibulus* maketh distinction of Horses by their colour in this manner, the gray or blewish spotted is fittest for the hunting of the Hart, the bright bay for the Bear and Leopards, the black with flitting eyes against the Lyons. The natural colour of the wilde Horses are an ash colour with a black bridle from the head along the back to the tail; but among tame Horses there are many good ones of black white, brown, red, and flea-bitten colour. But yet is to be remembered, that seldom or never Colts be foaled white, but rather of other colour, degenerating afterward by the increase of their age, for such Horses are more lively, durable, and healthy, then other of their kinde, and therefore *Pimarch* commendeth a white Horse of *Sylla* for his swiftness of foot and stomach: among all colours, first the black, then the bay, next the white, and last the gray are most commended.

*Camerarius* commendeth a certain colour called in Latine, *Varinus*, and may be englished dapple gray, because of the divers in-textures of colours, which although many Nations do disallow, yet undoubtedly that colour (saith he) is a signe and argument of a good nature, constituted and builded upon a temperate commixture of humours. Where black, white, and yellow hairs appear, so that the sight of one of these is nothing inferior to the equestrial partly coloured Caparisons: Among Horses, which are divers coloured, they which have hairs in their forehead, and one white foot, were most commended; such were the *Thracian* Horses not admitted in copulation, of which *Virgil* speaketh in this manner,

*Thracius alba*  
Portat equat bicolor maculis vestigia primi  
Alba pedis, frontemque ostentans induus albam.

Black Horses also which have one russet or swart spot in their faces, or else a black tongue are highly commended for generation, but the pale coloured Horses are no wayes to be admitted to cover Mares, because their colour is of no account: and likewise it is seldom seen that the Foal prove better then the Sire: The bay colour hath been received without exception for the best travellers, for it is supposed, that *Baudius* (amongst the Latines) is derived of *Vadium*, quia inter cetera animalia futilius vadit: because among other creatures he goeth most surely.

Artificial means to make Mares conceive the best coloured Colts.

It is also behoveful that in a Stallion Horse, the mane be of the same colour with the body. Horse-keepers have devised to make their Mares conceive strange colours, for when the Mares would go to the Horse, they paint a Stallion with divers colours, and so bring him into the sight and presence of the Mare; where they suffer him to stand a good while, until the perfectly conceive in her imagination the true Idea and full impresson of those pictures, and then they suffer him to cover her, which being performed, she conceiveth a Foal of those colours: In like manner; Pigeons conceive young ones of divers colours.

The Germans to mingle the colour of Horses hairs (specially to bring black among white) take the roots of Fearn, and of Sage, and seethe them together in lee, and then wash their Horses all over therewith. For the making of their Horses white, they take that fat which ariseth from the decoction of a moul in an earthen pot, and therewithall anoint the places they would have white, Also they shave off the hairs, and put upon the bald place crude Hony, and Badgers grease, which maketh the hairs to arise white: and many other means are used by Horse-leeches, as afterward shall be shewed. In the old age of a Horse his hair doth naturally change white, above all other beasts that we know, and the reason is, because the brain-pan, is a more thin and slender bone, then the greatnes of his body would require, which appeareth by this, that receiving a blow in that place, his life is more endangered then by hurting any other member; according to the obliervation of *Homer*:

*Et quæ se habent capiti, lethaleque vulnus*  
*Præcipue sit equis.*

And thus much shall suffice for the colour of a Stallion: now followeth the form or outward proportion of the body, which ought to be great and solid, his stature answerable to his strength, his sides large, his buttocks round, his breast broad, his whole body full and rough, with knots of muscles, his loote dry and solid, having a high hoof at the heel. The parts of his beauty are these, a little and dry head, the skin almost cleaving to the bones, short and pricked ears, great eyes, broad nostrils, a long and large mane and tail, with a solid and fixed rotundity of his hoofs, and such an one, as thrusteth his head deep into the water when he drinketh; his ribs and loins like an Ox, a smooth and straight back, his hanches or hips long, broad, and fleshy, his legs large, fleshy and dry, the sinews and joyntures thereof great, and not fleshy near the hoofs: that the hinder part of his body be higher then his forepart, like as in a Hart, and this beauty better appeareth in a lean body then in a fat, for fatness covereth many faults; the former parts are thus expressed by *Horace*:

*Regibus hic mos est ubi equos mercantur, operos*  
*Insipiant, ne si facies ut sepe decora*  
*Molli sulca pede est, emptorem inducat biantem,*  
*Quod pulchri clunes, breve quod caput, ardua cervix.*

If you will make trial of your Stallion, whether he be fit for procreation, *Hipparchus* teacheth you this experiment: press the genital member with your two fingers, and with locks of Wooll draw out his seed, which being to drawn out, if it cleave and hang together, so as it will not be cut nor easily parted, it is a demonstration of a good Stallion; but if it hang not together like birdlime, but easily go asunder like Milk or Whay, such a Horse is not to be admitted to cover your Mares. When Horses be old among other faults, they engender Foals lame in their feet, and therefore they are to be kept, and not to be admitted to copulation nor War; for his rage is like a weak fire among wet stuble, according to these verses:

*Morbo gravis aut senior annis*  
*Deficit, abde domo, nec turpi ignosce senecti.*  
*Frigidus in venerem senior, frustra que laborem*  
*Ingratum trahit: & si quando ad bralla ventum est,*  
*Ut quondam in stipulis magnus sine viribus ignis,*  
*Incaustum fuit.*

Therefore it behoveth that a Stallion Horse be not under three years old when he covereth a Mare, and it is best for him to begin at five, for so he will endure in generation, not only till he be twenty year old, but also to thirty or forty years, as in some Countreys hath been often proved. They are not to be admitted to cover above fifteen in one year at the most, and a young Horse not above ten or twelve in one year; the residue may be suffered with observation of their strength and nature.

The King of *Babylon* beside his Horses for war had eight hundred Stallions, which were admitted to cover six thousand Mares, so that every one had twenty a peece; there is also a place in *Syria* near *Apamia*, where in one plot of ground were nourished thirty thousand Mares, and three thousand Stallions (as *Callius* saith) so that every Stallion had an hundred Mares to cover (in that place) which number exceedeth the proportion of nature. It is also to be remembered, that Stallions are to be separated from Mares all the year long, except at the time of procreation, and then also he must be largely fed according to these verses:

*Hic animadvertis, instans sub tempus, & omnes*  
*Impendunt curæ denso diffendere pinguis*  
*Quem legere ducem, & pecori duxere maritum:*  
*Florentesque siccant herbas, fluviosque ministrant,*  
*Farræque: ne blando nequeunt superesse labori:*  
*Invalidae patrum referant juvenia nati:*  
*Ipsa autem macie tenent armenta volentes.*  
*Atque ubi concubitus primus jam nota volupus*  
*Sollicitat, frondesque negant, & semibus arcent.*  
*Sæpe etiam cursu quatunt, & Sala fatigant:*  
*Cum graviter iunctis gemit arva fringibus: & cum*  
*Surgentem ad Zephyrum palæe jactantur inanes.*  
*Hoc factum, nimio ne luxuriatus usus*  
*Sit genitali arvo, & sulcos oblitus inertes,*  
*Sed rapiat sitiens Venerem, interiusque recondat.*

Abstrus.

It is also to be observed, that the males which are designed for procreation be not over much labor'd, for then he will be the more weak for generation, nor yet lussured to be too idle, for then a certain steamy humor is increased in them, which likewise disableth them in copulation; and thus much for the males.

The choice of Mares.

Almost all the same things which have been said of the male, belong to the female, except the belly of the female ought to be greater; but if there be any white speckles or spots in the eyes of the female, such as are not contracted by accident, but breed in them by nature, such a one is refused for breed; for an Horse born of such a Mare, when he cometh to be old, will likewise be affected with the same blindness; but if it be a female, by reason of her yearly purgation, the may peradventure avoid that mischief.

It behooveth therefore that the Mares appointed for race, be well compacted, of a decent quality, being fair and beautiful to look upon, the belly and loins being great, in age not under three nor above ten years old.

The copulation of Horses and Mares.

Concerning their admission to generation, it is to be remembered, that the Latins have a proper term to signify the appetite of the female to the male, which they call, *Equire*, that is, Horsing, and they continue in that lust sixty dayes together; the signs whereof are these, They forsake their company, running not toward the East and West, but the contrary, to the North and South: neither permit they any body to come near them, until they either be wearied or meet with the male, and if they meet with a female like themselves, they joyne near to her, and seem to rejoice at her society, lifting up the tail, changing of the voice, and sending forth of her secrets, a certain thin humor, somewhat like the feed of a Horse, which is called *Hippomanes*.

Aristotle. Albertus.

They also make water more often than at other times, so that among all the females in the world, there is none, beside a Woman, that is more greedy of procreation than a Mare, because they want a menstruous purgation, and yet eat abundance of meat, which *Virgil* expresseth, setting down their unlimitable rage, which carryeth them over Mountains and Rivers, in the time of this fury.

*Silicet ante omnes furor est insignis equarum,  
Et mentem Venus ipsa dedit, quo tempore Glauci  
Petrinades malis membra absumpsere quadrige.  
Illas ducit amor trans Gargara, tranque sonantem  
Asonium, superant montes & flumina tranant.*

Also at that time, their genital hangeth forth more than at other times, but if their manes be shorn off, their lust is extinguished. It is reported also by *Columella* that in Spain, in the Mountain Tegu which reacheth unto Portugal upon the Ocean, there be Mares which rage so far in lust, that by their ardent desire of copulation they conceive by the Southwest winde, without the company of a Horse, (even as Hens do lay eggs being not trod by a Cock) which are called *Hypemnia*, but those Foals live not till they be above three year old. And it is the property of these Mares (saith *Avienus*) by kicking against the winde with their hinder legs, to open their own womb, and to receive in that delectable air, wherewithal they are satisfied.

Also he saith, that he heard of an old man, which was born in the Isle of *Pealupha*, that the Mares thereof never cease running, from the one end of the Island to the other, when the rage of their lust is upon them; which thing is elegantly described by a Poet, how they turn themselves to the West, standing upon the rocks, and there draw in the cold air, which oftentimes maketh them conceive, wondering that they conceive not rather by the East running or South, then by the Westly winde bordering upon the North; the Poets words are these:

*Continuque evadit ubi subdita flamma medullis,  
Vere magis (quia vero odor redi obfus) illa  
Ore omnes versa in Zephyrum, stant rapidius altis  
Excepitque leves aurar: & sese sine ulla  
Conjuncta vento gravidam (mirabile dictum)  
Saxa per, & Jovis, & depressas convulvas  
Diffingunt, non Eurae tunc neque Solis arduus  
In boream Courruat, aut unde nigerrimus auster  
Nascitur, & pluvio contritus frigore calum.*

Sometimes Horses and Mares admit copulation at two year old, but those Foals never prove excellent, but at three year old or thirty months, they suffer conjunction safely and with profit, because they cease to lose their teeth. They continue in their generation, bearing every second year, the male until he be thirty year old, and the female as long as she liveth; but the male engendereth yearly: And it is reported of a Horse in *Opus*, that covered a Mare after he was forty year old, being only hump up and down from the Mare.

Pliny.

A history of a Stallion to his own dam.

*Pliny*, *Oppianus*, *Ellianus*, and *Aristotle* do confidently affirm, that when the King of *Seybia* had all his generous breed of Horses destroyed by a pestilence (except one of his best Mares and a Stallion which was a Foale of that Mares) being desirous to continue the breed, caused his Horse-keeper to put the Son and the Mother together, but the Horse refused copulation with his own

own Parent. Afterward the Horse-keeper covered the Mare with artificial skins, and, likewise dressed the Horse in such manner, as one could not know the other, whereupon being brought together the second time, the Stallion covered his own Mother: Afterward the Horse-keeper discovered them, the one to the other, whereby they knew the fraud, and grew guilty in themselves of incestuous commixtion: Whereupon they took no other revenge upon themselves, but ran to the top of an high rock, and there successively threw down themselves, one after another, so ending their miserable days, and preventing their Malters hopes; to teach all mankind that they ought not to seek to thrive by sins against nature: the like is before rehearsed of a male Camel.

The very like story is reported of a Horse in the coasts of *Rea*, yet this is not held to be general: for beasts (as *Aristotle* saith) do promiscuously cover one another; the Father the Daughter, the Son the Mother, the Brother the Sister; and this maketh them to be perfect beasts; and the stories before recited may be true, yet are they extraordinary: otherwise the common rule of *Ovid* remaineth true, That it is not a filthy thing for beasts to observe no degrees of nature.

*Coeunt animalia nullo  
Cetera delectu, nec habere turpe juvencae  
Ferre patrem tergo, sit equo sua filia conjuga.*

The best time of the year for the joyning of Horses and Mares for copulation, is from the vernal equinoctial to the Summer solstice, because then the Colts which are foaled in due time, have the green herbs and all the warm weather for the succour of their infancy: and if the Mare (after she have been once covered) refuse the male, let her rest ten days, and then bring her to the male again; if she refuse the second time, you may take it for granted, that she is filled already. Wherefore seeing it is known certainly that a Mare goeth twelve moneths with young, it is an easie matter so to order the time of her copulation, that her foale may always be delivered in a warm and seasonable time of the year: for which cause there is an invention for stirring up the lust both in the male and female; the *Hymenaeus* shepherds, by the sweetness of songs upon their pipes, stirred up their Horses and Mares to copulation, but the more assured way is, to follow the direction of *Columella* and *Abstrus*, to provoke them by natural means, like as Bulls and Kine.

And first of all for the male, give him the tail of a Mare burned, mingled with wine; and anoint therewithal his testes and genital member, and so shall the dull Stallion be more prone to venery; also there is a kind of *Satyrium*, which they give to them in drink, or the powder of a Horses testes: likewise if the female refuse, take shrimps beaten soft with water (as thick as hony) there withal touch the nature of the Mare in her purgation, and afterwards hold it to her nose; or else take Hens dung mixt with Rozen and Turpentine, and anoint the secrets of the Mare, which shall so far increase her lust, as it cureth the foolishness better than the shrimps, and increaseth lust. But you must regard, that no lean and ill favoured Mare be anointed; because the Horse is quickly wearyd from his lust, and so delighteth only to be filled therewith without doing any thing.

Other again do first of all bring some vulgar Horse to the Mare, who provoketh and stirreth her to lust, and when he is near the very fact of filling her; they lead her away to a more generous Stallion, to be covered by him: And so if none of these means do prevail with her, they do rub her secrets with a Nettle, and that causeth her to suffer the Horse to enter.

*Demetrius* also saith that it is in our power to cause our Horses to bring forth males or females; for if we suffer them to couple when the North winde bloweth, or the third day before the full Moon, or bind his left stone, he shall get a male; but if when the South winde bloweth, or three days after the full Moon, or bind the right stone of the Horse, it will prove a female.

Also if at the time of copulation, the Horse leap off from the Mare on the right side, it is a token it will be a male, but if on the left side, it will be a female. Carnal copulation is most acceptable to Horses, and lesse grievous unto them thereof Near, for there is no kind (man only excepted) that is so venereous and nimble in generation as is a Horse or Mare.

The males know their females with whom they live; although they have been but a few days together; and if strange females fall into their company, they expell them away by biting, feeding single and alone with their female by themselves; but if any male or other male Horse come within their walke, then presently they make force at him; if their female run from them, they restrain her by biting; and in this time of their rage, they neither regard the rider, nor their adversary, nor the bridle, nor cruel stripes, nor keep him, nor rocks, nor rays of the earth, if they winde the anoyous favour of their fellows; according to the saying of *Virgil* in these verses.

*Nemo videt, ut sola frenos premitter equorum  
Ceteros, si tantum notat uterq; virum  
Ac neque eum jam frenis, neque ullo modo  
Non possunt superis, ceteris, quibus offensa resistunt  
Flumina, correptos unda virginitatis honores.*

The manner to procure Horses to copulation.

To ingender a male or female.

It hath been also received, that a barren Mare shall conceive if you take a bunch of leeks bruised small and put into a cup of Wine and twelve French flies called *Cantharides* in water, put them two days together into the genital of a Mare, like a Glyster, and afterwards put her to a Horse anointing her secrets with the said ointment two several times, when the Horse leaps down from her; or else they take Niter, Sparrows dung, Rozen, and Turpentine, thrusting the same into the Mares genital, whereby it hath been proved, that fecundity oftentimes followed.

Also some use Siler of the Mountains, to procure conception in Mares and Cows, and the true sign of conception is, when their nature (that is) the fluent humour out of their secre's ceaseth for a month, or two, or three; and *Pliny* saith, that when a Mare is filled, she changeth her colour, and looketh more red, which is to be understood not of her hair, but of her skin, lips and eyes, her hair standing more full then before. Then let them be separated from the males, exempting them from moist places, cold and labour, for all these are enemies to her foaling, and cause abortion.

Likewise they must not have too much meat nor too little, but only a temperate diet, and soft lodging, their better ordering is elegantly described in *Virgil*, by these Verses.

*Non illos gravibus quisquam iuga ducere plaustris,  
Non saltu superare viam sit passus, & aeri  
Carpere prata iuga: fluviosque innare repates.  
Solvibus in vacuis pascant: & plena secundum  
Flumina, muscos ubi & viridissima gramine ripa,  
Sperulæque tegant: & sæva proculet umbra.*

This is most certain, that if a Woman, in her flowers, touch a Mare with foal (or sometime do but see her) it causeth to cast her foal, if that purgation be the first after her Virginity: In like manner if they smell of the snuffe of a Candle, or eat Buck-mast or *Genian*. The *Egyptians* when they will describe a Woman suffering abortion, they picture a Mare treading upon a Wolf, for if a Mare kick at a Wolf, or tread where a Wolf hath trod, she casteth her foale: If an Ass doe cover a Mare which a Horse hath formerly filled, there followeth abortion; but if a Horse cover a Mare which an Ass hath formerly filled, there followeth no abortion, because the Horses seed is hotter then the Asses. If a Mare be sick of abortion or foaling, *Polyphy* mingled with warm water given her in a horn, is a present remedy.

Orui.

*Arifole.*  
The time of  
their going  
with young

*Arifole.*

The *Scythians* when they perceive their Mares to be quick with foale, they ride upon them, holding opinion that thereby they cast forth their foales with lesse pain and difficulty. They carry their young one in their wombs, as hath been already said, twelve monthes, but sometimes they comeat eleven monthes and ten days, and those are commonly males, for the males are sooner perfected in the womb, then the females, and commonly the females are foaled at twelve monthes and ten days, and those which carry longer are unprofitable and not worth education. A Mare is most easily delivered of her young among other beasts, and beareth most commonly but one at a time, yet it hath been seen that twins hath proceeded from her. At the time of her delivery, she hath lesse purgation of blood, then fo great a molde of body can afford, and when the hath foaled, she devourerth her seconds, and also a thing that cleaveth to her foales forehead, being a piece of black flesh called *Hippomane*, neither doth she suffer her young one to suck until she have eaten that, for by smelling thereunto, the young and old Horses, or other of that kind would fall mad: and this thing have the impostors of the world, used for a *Philtre* or amorous cup, to draw women to love them, *Virgil* speaketh thus of it;

*Quæritur & nascitur Equi de fronte revulsa  
Et matris præsepium amovet.*

And again

*Hinc demum Hippomane: vero quod nomine dicunt  
Pastores, lentius diffilat ab infansque virum  
Hippomane, quod capis male lægeret, necesse,  
Miserumque brisum & non iussu verba.*

This poison made into a Candle (as *Anaxilas* saith) in the burning thereof, there shall be a presentation of many monstrous Horses heads. There is very great poison contained in this *Hippomane*, for the *Arcadian Phœnix* made a Horse of brass at *Olympus*, & put *Hippomane* into the same, and if the Horse at any time feed this Brazen Horse, they were so far enraged with lust, that no halter or bands could hold them, but breaking all, run and leaped upon the said Brazen horse, and although it wanted a tail, yet would they forsake any beautiful Mare, and run to cover it; neither when they came unto it, and found it by their heels to be foundling and hard brasse, would not they despair of copulation, but more and more, with noise of mouth, rage, and endeavor of body, labour to leap upon the same, although the slippery brasse gave them no admision or stay of abode upon the back of that substance, neither could they be drawn from the said Brazen Image, untill by the great strength and cruell stripes of the riders they were forcibly driven away.

Some

Some think this little piece of flesh to cleave to the forehead, others to the loins, and many to the genitals; but howsoever it is an unspeakable part of Gods providence, to make the Mares belly a sepulchre for that poison; for if it should remain in the males as in the females the whole race of Horses would utterly perish and be destroyed through rage of lust, for which cause the keepers and breeders of Horses do diligently observe the time of their Mares foaling, and instantly cut off the same from the Colt, reserving it in the hoof of a Mare, to procure the Stallions to carnal copulation, and the Colts from which they cut this piece of flesh, they specified in *Virgil* it is manifestly said *Alenur*, that the Mare will never love that foal, from whence she hath no progeny and conceived this piece of flesh.

And this poison is not only powerful in brute beasts, but also in reasonable men, for it at any time by chance or ignorantly they eat hereof, they likewise fall to be so mad and precipitous, as raging both with gestures and voices, that they cast their lustful eyes upon every kind of Woman, attempting whosoever they meet them to ravish or ingender with him; and besides because of this oppression of their minds, their body consumeth and fadeth away: for three dayes past the Colt is foaled he can hardly touch the ground with his head: It is not good to touch them, for they are harmed by, often handling, only it is profitable, that is, be suffered with the dam in some warm and large stable, so as neither it be vexed with cold, nor in danger to be oppressed by the Mare through want of room. Also their hoofs must be looked upon, lest their dung sticking into them burn them, afterward when it waxeth stronger, turn him out into the field with his dam, lest the Mare over-mourn her self for want of her foal, for such beasts love their young ones exceedingly.

After three dayes let the Mare be exercised and rid up and down, but with such a pace, as the foal may follow her for that shall amend and encrease her milk. If the Colt have soft hoofs, it will make him run more speedily upon the hard ground, or else lay little stones under their feet, for by such means their hoofs are hardened, and it that prevail not, take Swines grease, and Brimstone never burned, and the stalks of Garlick bruised and mingled all together, and therewithal anoint the hoofs.

The Mountains also are good for the breeding of Colts, for two causes, first for that in those places their hoofs are hardened; and secondly by their continual ascending and descending, their bodies are better prepared for induring of labour. And thus much may suffice for the educating and nursing of foals.

For their weaning observe this rule, first separate them from their dams twenty four hours together, in the next morning let them be admitted to suck their belly full, and then removed to be never more suckled: at five monthes old begin to teach them to eat bread or hay, and at a year old give them Barly and Bran, and at two years old, wean them utterly.

### Of handling, taming, or breaking of Horses.

They which are appointed to break Horses are called by the *Grecians* *Epoptize*, *Hippodami* and *Hippocomi*; the *Latins*, *Equitantes*, *Arulantes*, and *Cuciores*; in *Italian* *lo Rozore*. *Alpharasi* is of opinion that foals are to be used to hand, and to be begun to be tamed at 18 monthes old, not to be backed but only tied by the head in a halter to a rack or manger, so that it may not be terrified for any extraordinary noise, for which cause they use them to brakes, but the best time is at three years old, as *Crescentius* teacheth in many Chapters, wherefore when they begin to be handled, let them touch the rough parts of his body, as the mane and other places, whereon the Horse taketh delight to be handled: neither let him be over severe and Tyrannous, and seek to overcome the brash by stripes, but as *Cicero* saith, by fair means, or by hunger and famine.

Some have used to handle them sucking, and to hang up in their preference bits and bridles, that so by the sight and hearing the ginging thereof in their ears, they might grow more familiar. And when they came to hand to lay upon their backs a little boy flat on his belly; and afterward to make him sit upon him formally, holding him by the head, and this they do at three year old, but commit him to no labour untill he be four year old, yet domestical and small Horses for ordinary use are tamed at two year old, and the best time for the effecting hereof, is in the month of March.

It is also good in riding of a young Horse to light often, and to get up again, then let him bring him home and use him to the stable, the bottom whereof is good to be paved with round stones, or else planks of Oak, strewing litter upon it when he lyeth down, that so he may lie soft and stand hard. It is also good to be regarded, that the plank he so laid, as the Urine may continually run off from them, having a little close ditch to receive it, that so the Horses feet may not be hurt thereby, and a good Mistrer of Horses must oftentimes go into his stable, that so he may observe the usage of this beast. The manger also ought to be kept continually clean for the receiving of his provender, that so no filth or noisome thing be mingled therewith; there ought also to be partitions in it, that so every beast may eat his own allowance, for greedy Horses do not only feedly raven up their own meat, but also rob their fellows. Others again have such weak stomachs that they are offended with the breath of their fellows; and will not eat except they eat alone.

The

Vegetius.

The rack also is to be placed according to their stature, that so their throat may not be too much extended, by reaching high, nor their eyes or head troubled, because it is placed too low. There ought also to be much light in the stable, lest the beast accustomed to darkness, be offended at the Sun light, and wink over much, being not able to endure the beams when he is led abroad; but yet the stable must be warm and not hot; for although heat do preserve fatness, yet it bringeth indigestion and hurteeth a Horses nature, therefore in the Winter time the stable must be so ordered, as the beast may not be offended or fall into diseases by overmuch heat or suddain cold. In the Summer time let them lodge both night and day in the open air.

Camerarius.

This also in stabling of your Horses must be avoided, namely, the flies of Swine; for the stink, the breath, the grunting of Hogs, is abominable for Horses, and nature hath framed no sympathy or concord betwixt the noble and courageous spirit of a Horse, and the beauly sluggish condition of a Swine. Remove also far away from your Horses stables all kinde of fowl, which were wont to haunt those places to gather up the remnant grains of their provender, leaving behind them their little feathers, which if the Horse lick up in his meat, stick in his throat, or else their excrements which procureth the looseness of his belly.

It must also be regarded, that the stable must be kept neat, sweet, and clean, so as in absence of the Horse, it may not lie like a place for Swine. The instruments also, and implements thereof, such as are the Horse clothes, the Curry-combs, the Mane-combs, Saddles and Bridles, be disposed and hung up in order behind the Horse, so as it may neither trouble him eating or lying, nor yet give him occasion to gnaw, eat, and devour them for their own damage or hurt, for such is the nature of some wanton Horses, to pull asunder and destroy whatsoever they can reach.

They are therefore oftentimes to be exercised and backed, and principally to be kept in a good diet, for want of food dejecteth the spirit of the noblest Horse, and also maketh the mean Horse to be of no use; but on the contrary a good diet doth not only make a mean Horse to be serviceable, but also continue the worth and value of the beast: which thing Poets considered, when they fained that *Atrion* the Horse of *Neptune* and some others were made by *Ceres* the Goddess of Corn, which that *Atrion* the Horse of *Neptune* and some others were made by *Ceres* the Goddess of Corn, which that any mean witted man may interpret to signifie, that by abundance of provender the nature of Horses was so far advanced above ordinary, that like the Sons of the Gods they perform incredible things: whether therefore they eat chaffe, or hay, or grasse, or grain, according to the diversities of Countries, let it be wholesome, clean, fresh, and sweet, without dust, gravel, mulfiness, or evill smell.

In the morning give them Barly or provender, a little at a time in distinct or several portions, twice or thrice one after another, so as he may chew and eke digest it thoroughly, otherwise if he ravenit in, as he will do having much at a time, he rendreth it in his dung whole and not digested. About three hours after, he hath eaten his provender, give him a little of hay; and three hours after that, his dinners allowance of grain, as in the morning, and afterwards about two or three a clock hay again, and then some drink; last of all give him his allowance of provender for supper, with a bottle or two of hay, which ought to be more plentiful then the former servings: and yet these rules are not to be understood as though they might not be altered, for the times prefixed may be prevented if occasion require. Their best provender is Oats and Barley, yet Barly ingendereth the thinner and better blood, and therefore it is to be preferred, only the measure of the provender is left to the discretion of the Horse-keeper, and there is no meat more wholesome for a Horse, then Barly and Chaffe, because it will make him full of life, and also able to endure labour, yet not over fat.

In England in many places they give their Horses bread made of Fitches, Beans, and Pease. When one is to make a journey on horse-back, let him not give his Horse too much provender the noon before, but so much the more hay, and bread steeped in wine, and also let him serve him sooner at night then ordinary, that so the beast may take the more rest. There be which refuse to give Horses wet provender or steeped bread, because they conceive that it will breed in them loathsomeness of meat; but the truth is, a reasonable Horse-keeper preventeth that mischief; and besides, the meat of a Horse is altogether so dry, that the beast himself is indangered to be sick of that disease; and therefore it is as safe to give him moistened food sometimes, as well as to give him bread mingled with salt.

Camerarius.

When a Horse is weary or sweateth, let him not drink nor eat provender, but after he is walked a little while, give him hay, first of all covering him with a large cloth, and remember, that hay is not to be call before a Horse, as it is out of the rack, but first of all it must be pulled, and shaken betwixt the hands, for the avoiding of dust and other filth. Restrain the Horse as much as you may from eating the litter under his feet, for even the best meat so defiled is unwholesome. It is also good sometimes to suffer him to pick up his meat on the ground betwixt his forelegs, that will make his neck to grow thinner, leaner and more comely. Let his neck be fast bound in the stable with a Leather collar, and binde with a manicle his fore-leg to the hinder-leg on the contrary side, and so shall his be preserved in more health, because they cannot move out of their place but with difficulty.

Ruffus.

Concerning the drink of Horses, something more is to be added in this place, and namely breackish and troubled water, such as runneth softly, as in great ponds, is fittest for Horses, because that water, being hot and thick nourisheth better, and the swift Water is colder, and therefore more unwholesome, but in hot times (as in Summer) the sweet and clearer water is more convenient

ment if cullome be not against it. And because a Horse (except he drink freely) can never be fat, let his mouth oftentimes be washed within with Salt and Wine, and that will make him eat and drink more liberally: and yet the running water is more wholesome for Horses, because whatsoever is moveably fluent, is lesse subject to poison then that which standeth still; but if a Horse sweat or be weary, it is not safe to let him drink any thing, except he first stale, for in such cases followeth distillation. And it is better to turn or lead forth your Horse to water, then to bring it unto them. And if at any time necessity cause this to be done, then let the Water be very clear and fresh.

His stable or lodging ought to be ordered, as neither it offend him by cold in Winter, nor yet through heat in Summer, for both these extremities are pernicious: and therefore when the weather is extrem cold, then must the Horses back and belly be covered with a cloth; and when on the contrary it exceedeth in heat, then must his litter be taken away. Also in heat he must be covered with linnen to avoid flies, and in cold with woollen to help nature: likewise it is good toward night to pick, cleanse, and open his hoofs, with some artificial instrument, and to thrust into the hollow Cow-dung, or in defect thereof Horse-dung with a little straw, that so he may not shake it out again: but this is not good to be done every day, but rather every second day, and it is good to mingle therewith fewer or greafe, or else a new laid Egge with warm ashes. In ancient time they used not to shoe their Horses with iron, untill the dayes of *Catulus*, who remembreth this cullome, saying.

*Ferreum ut soleam tenaci in voragine mula:*

So that it seemeth that this devise was first of all invented for Mules. The Horse-shoes ought to be round like his feet, and not heave, lest the Horses nimbleness be thereby hindered; and great care must be had in nailing or setting them on, lest the tender and fleshy part of the foot be thereby pierced.

Another charge of a Horse-keeper is to keep his Horses lips soft, tender, and gentle, so as he may more sensibly feel his bit: and for this cause let him often rub them with his hands and warm water, and if need require with oil also: and in handling of a Horse this must be observed for a general rule, That neither he come to the Horse right before his face, nor behind his tail, because both these are dangerous to the rider; left by his heels or mouth he harme him, but on his side he may safely set upon him or handle his Horse, and when he leadeth him, he must likewise go on his side.

Likewise good and painful dressing of Horses is no small means to retain him in sound and perfect health; and therefore he must often be touched with the Curry-comb, and afterward with a handful of straw, so as the hand may follow the stroke to lay the hair smooth: And their fashion was in old time to brush over their Horses with a little linnen instrument made like a sword, whereby they excusse all dust from the beast: and herein it is wisdom to begin at the head and mane, and so to descend to other parts, and to touch the Horses back gently: he may wash the head and mane because it being so bony, it is dangerous lest the comb offend and grieve the beast, except it be layed on very tenderly, but it is not good to wash the legs, because dayly washing dothteth the hoof by sliding down of the water, and therefore it is sufficient only to stroke them down with his hands.

The neather part also of the belly is not to be kept over clean, for the more it is cleansed with water, the more is the Horse pained therein: when a Horse is dressed, it is good to bring him out of the stable, that so in the open air he may be tyed in a longer halter, and seem to be at liberty, whereby he shall be brought to more cleanness and tractable gentleness, standing upon some smooth stones, till all the dust and loose hairs both by the Comb and Brush be driven away, and in the mean time the stable be emptied, and this is to be performed before the Horses watering. You must also regard the skin whereon the Horses yard runneth be kept clean; for if it be stopped it hindereth urine, and maketh the Horse sick, and when your Horse is in dressing, let him have before him no manner of meat either of hay or provender.

Let them be led to the Water twice a day, and wash therein both legs and belly, except in the Winter time, wherein it is not safe to wet the Beasts so often: and if there be in them any appearance of sickness and infirmity, or if you have any purpose to give unto them any kind of medicine, then must you altogether forbear to water them. Some use to wash their Horses legs with warm wine-leees to refresh their joints and sinews after hard journeys, which cullome seemeth very allowable: other use in stead thereof warme dish-water out of the kitchen, and the backs they wash with cold water and salt.

Underneath their tails, and near their yards, you shall find them in the Summer time to be much annoyed with flies, and therefore it is a needful part of the Horse-keepers watchfulness to look in those places and drive them away, for so his charge will take the better rest.

And evermore there must be nourished a mutual benevolence betwixt the Horse and Horse-keeper, so as the Beast may delight in the presence and person of his attendant; and for this cause he may be kept from hunger, wet litter, cold in the Winter, and flies in the Summer: and furthermore a diligent caution must be had, that the Beast be not provoked through overmuch severity, for if the Horse by his keepers violence be often driven to his rack and manger to avoid stripes,

Camerarius.

Vegetius.



stripes, either he hurteth his shoulders or legs by his own weight or force, or else groweth into a trembling at the presence of a man, and so never yeeldeth any loving obedience; or else falleth into some furious and unreclaimable evil qualities. The Master therefore ought often to enter into his stable, and take a view of his Horses usage, whereby the Beast will quickly take notice of him, especially if he have but one, for it is a great folly and piece of ill husbandry to trust Servants and not to oversee them. *Cato* was wont to say, *Fronti capiti prior*: that is, as the forehead is before the nape of the neck; meaning thereby that nature hath set him highest and foremost, which should not hide himself, but take his place upon him and discharge it, for it is not safe or any part of wisdom, to see by another mans eyes, or work altogether by Deputies.

Men must also be afraid of lending their Horses, for the *Germani* have a pretty proverb, that they will not trust their wives at great feasts out of their sight, for commonly they learn some evil fashion or other more then they had before; and so much more Horses (after lending) return home again to their Masters with alteration of strength and quality.

### of adorning and furnishing Horses.

The furniture of a Horse and his trimming.

I Cannot approve them that cut off their Horses tail or foretop; one received beginning from an ignorant persuasion of increasing the strength of the Horses back, and the other from an imagined comeliness, by trimming it with ribben or some devised knot, or that it hindered the Horses sight. In the first the Beast is wronged and deprived of his help against the flies, and decency of his hinder parts; and in the second nature accused, for not adorning the Horses forehead with more gaudy and variable coloured hairs, and providing a bunch of hair to weaken his eyes; but neither of these are tolerable, for a wife man once to imagine, and therefore I will not spend any more time to confute this vain adorning of Horses.

Let the horse-keeper take heed that he harm not the Beast when he putteth on his Bridle, for a little negligence quickly bringeth a great offence, by touching, wringing, and oppressing any tender part in the Horses head or mouth. He must always put on his Bridle on the left side, and if the Horse of his own accord do not open his mouth to the bit, then must he gently open his mouth with one finger, and so put it upon him; and if by that means he open not his mouth, then presse or wring his lip upon his great canine tooth, which thing causeth any Horse to open his mouth.

Also it must be regarded that the Horse in leading be not drawn after you, for so will he be made hard headed, unwilling to follow. Again his Cheeks must not be pinched by the Bit, lest the skin grow senseless; and also it must not hang long or loose in his mouth, for so he will be always biting his bit, and give lesse obedience to his Rider.

*Camerarius* writeth that he hath seen some put Salt upon their bits, whereof the Horse licking or tasting, became more willing to take it into his mouth; and for the better performance hereof, it is necessary to observe by often trial, what kind or fashioned bit best becometh and fiteth the Horses mouth, and finding it, keep him thereunto continually: and when it is put on, neither wring his Cheeks, or let him rowl it betwixt his teeth.

The Saddle also must be so fastened to his back, as that it may not turn or rowl upon the same; wherefore he which layeth it thereupon, must come on the left side, and gently without violence or noise, set it upon the Beast; so that neither girths, peytrill, flurrops, trappings, or crupper, fall betwixt the Back and Saddle, neither covering therewith the Horses wither, nor yet touching his hips or loins.

First of all let the peytrill on the breast be buckled, then the girths in order neer the forelegs, not upon the belly, for upon the belly they will be sliding off, and that is against the rules of riding; for *Bene equit qui bene cingunt*; that is to say, they ride well which bind fast; and this ought to be done in an open place, where both the Rider and the Horse may have more liberty: where-withal a generous and great stomached Beast is much delighted: neither must he be tyed or drawn too hard till the Rider be seated. Look also often to the girths, that they wring not the sides, or pull off the skin.

### Of Riding and sitting on Horseback.

When you are to get up and mount on Horseback, take hold on the lower part of the Bridle neer the Bit, with the left hand, with such a distance as may both keep him from rising, nor give him offence, if you take advantage to get into the Saddle, and with the right hand take the reins on the top of the shoulders and the mane, and so hold them, as you give no check to the Horses mouth in mounting: there are other rules for this among Riders, where-withal I will not meddle, only it is good to use your Horse to backing both fadled and bare, as well from the plain ground, as from blocks, and risings invented for the ease of man.

Therefore before you go to Horseback, first stroke your Horse, and make much of him with gentle words, or other convenient sound which the Horse understandeth, and so will he stand more willingly till you be on his back: for this thing there is in *Plutarch* an excellent story of *Alexander* the great, when *Bucephalus* was first of all presented to his Father King *Philip*, by a *Thessalian*, called *Philonix*: For when the King was persuaded to go forth into the field to try the qualities of this

Beast,

beast, which was so highly commended for rare parts, and valued at such a price, as none but a King might yeeld for him, then the Horse began to snort, and kick, and to admit no man to come unto him within the length of the reins, but kept aloft like a wild and untamed Horse: yeelding no obedience to voice or other signes of the Riders: whereat the King fell exceeding angry, and bid them lead away the unruly and untamed Horse: *Alexander* being present, complained of the ignorance and fearfulness of the Riders, and that they were the cause why such a generous and gallant beast was no better manned. At the hearing whereof, King *Philip* smiled, and yet so carried himself as though he had not heard the words of his Son, until *Alexander* repeated his saying the second time; whereunto his Father replied, What (sir Boy) will you make your self more skillful then these old cunning Riders? will you lay on them an imputation of fear and ignorance? Yes, said *Alexander*, I will adventure to handle this Horse better then any other: Ye but (said *Philip*) what punishment then wilt thou undergo if thou fail and perform not what thou hast said? What punishment? (said *Alexander*) why I will give them the price of the Horse: Whereat the King laughed and struck up the wager, and so had *Alexander* the reins of the Horse delivered to him, who presently turned him about against the Sun-rising, that so he might not be terrified with the shadow of the beholders, and so led him up and down softly two or three turns, and at last won the Horse to hand, which he gently stroked and applauded: and when he had gotten perfect intelligence and understanding of the Horses stomach, he cast off his cloak, and addressed himself to mount on his back, so holding the reins and bearing his hand and whole body as he did not check or pinch the Horses mouth: so he inclined him first of all to lay away his stirred and angry minde, and afterward paced him to and fro gently, which the Horse endured: At last he put Spurs unto him, and made him run, leap, career, and curvet, to the terrour, at the first, of all the beholders, and afterward to the singular admiration and praise of himself: which caused the company or train to applaud this fact, and forced the old man his Father, to send forth tears for joy; and when *Alexander* descended from his Horse, he could not contain himself, but he must needs go kisse and embrace such a Son, whereby it is manifest, that when a Man is to ride on a generous spirited Horse, he shall bend him to endure the burthen by gentleness and familiarity, so as the Beast may still know and love his Rider.

Likewise when the Master mounteth, it is requisite that the servant be on the other side of the Horse to hold the stirrop, for so shall he get up more surely, and set himself more softly. Some Horses are taught to bend their knees to take up their aged and sick Masters, that so they may be the lesse offended in ascending to their backs, and this custom (saith *Pollius*) did first of all begin among the *Perisians*.

The ancient *Germani* were so singularly exercised in Horsemanship, that standing upon the ground and holding a Spear or Lance in their hands, they mounted without other stirrop or vantage upon their Horses backs; and not only when they were ordinary attired in common garments, but then also when they were armed, (though *Julius Caesar* take from them all glory of Chivalry) yet now adays the invention of Saddles with stirrops, is most easie both for Horse and Horsemen, being then better the *Peletrobian* invention time.

When the Rider is in his Saddle, and is well seated, he must not sit as in a Chair or Chariot, bended together, but rather keep his body upright, only bowing outward his knees, for so shall he be better able to defend himself, or offend his adversary; for he must rather seem to stand then to sit on horseback.

The Rider or Master of Horses must spare his Horse in the heat of Summer, (about *Dogs-Rust* dayes) and in the cold of Winter, and never at any time to Ride past the twilight of the evening. The Horse being empty, is more prone to make water then being full, and therefore must not be hindered in that desire: and always after his staling, ride him not too fast, until his nerves which were extended to let forth the Urine be contracted, settled and drawn together again.

If in the Winter time a Horse be to passe over a soord of water (which will ascend up above his belly) let him stale first, lest he fall into the Strangury, and also be a little eased of his load.

There is no beast that rejoyceth more in celerity and swiftness then a Horse, because so soon as he is turned out of hand, he instantly runneth away speedily, and doth walke softly as at other times: and this is a pleasure to them, except when they are provoked above their desires: and the counsel of *Xenophon* when you are to Ride fast or for a wager, is this, bend the upper part of the body forward, stretching out the hand which carryeth the reins; now drawing it in, and then letting it at length again; and therefore it is good in such cases to use short reins, and if the Horse in his course stretch forth the reins of his own accord, then is it a sign of an unskillful Rider, or of a weak and unstable Horse. Add not Spurs but in great necessity, but guide and provoke him with voice *Pollius*. And riding rod, for quick and good metled Horses are by the Spur made fierce; and gentle natured Beasts made sluggards like Asses, which by often beating seem to neglect and despise stripes.

You must also shorten and lengthen your journeys and times of Ridings, so as they may neither be certain to the Beast, nor yet over long; and specially after a long journey, take a shorter if you Ride upon the same Horse.

First of all let him be used to plain and equal wayes, and if he be to leap or go up a hill, it was a precept of the old *Greeks*, that then the Rider must lay the reins in his neck.

Y



If the Horse At any time be either more fierce or sluggish then ordinary, he may be help by these means. Wildeness and fierceness of Horses, is like to anger and rage in men; and therefore occasions of offence in word and deed must be avoided: therefore as soon as the Rider is upon his back, let him reit a little before he set forward, and then also let the Horse move but his own pace: for as men are offended with suddain violence and imperious gestures, so also are Horses: but if the Horse being flirred to his race, be more forward and hot then ordinary, he must be gently restrained by the bridle; and it is better to qualifie their rage in long and spacious direct journeyes, then in often windings and turnings.

But if any man be so simple as to think that by length of journey or race, his Horse will be more meek, because he may be tyred, he deceiveth himself; for as rage in man inventeth hurtfull revenge, and turneth into malice by continuance, so also in Horses it procureth a headlong ruine (if it be not prevented) both to Horse and Rider: and therefore if your Horse be of a generous spirit, never provoke him to ferocity, for as they are wilde and fierce, so are they wicked and harmful.

It is also better to use light and gentle bridles then heavy and sharp, except the Rider can by his art so frame the sharp as the gentle bit: and also the Rider must so frame himself in his art of riding, that in the commotion of his Horse, he may not touch any member or part of him, but only his back whereupon he sitteth.

He must also learn his differet terms, to incite and stir up his Horse to run forward, which the *Grecians* call *Clagmus*, or else to restrain him and keep him in, which they call *Poppymus*, the one closeth the lips, and the other toucheth the palat.

If the Horse be fearful of any thing, you must shew the thing to him plainly, that so by custom he may learn not to be skittish, and let him smell thereunto, till he learn not to be afraid; but if men beat them, they do but fear them more; for while they are so ill handled, they suspect that the things whereof they are afraid are the cause of their stripes. In like sort when they go on the one side, or turn back again, it is good to use the Spurs, because they encrease their terrour and perverseness; and therefore as peaceable encouragement and friendly perswasion is the best means to perswade a man in his fear, the like course must be taken with a Horse, that he may go straight on without doubt or trembling; and learn not to account any thing horrible to his nature.

When a Horse is so tyred and wearied in his journey that a man would judge him unfit for any labour, take off his saddle and burthen, and put him into some stable or green field, where he may tumble and rowle over and over, and he shall easily recover. In ancient time, if Horses were to be travelled through snow, they made them boots of sackcloth to wear in their journey.

### Of the disposition of Horses in general.

Among the flocks or herds of Horses, there is not a Captain or leader going before or governing the residue, as among Oxen, Sheep, and Elephants; because the nature of these is more inflable and moveable it being a swift and high spirited Beast, and therefore hath received a body furnished with such members as are apt to be swayed by such spirit: for *Lezantium* truly observeth in them a desire of glory, because after victory, the conquerours exult and rejoyce, but the conquered or overcome, mourn and hang down their heads; which thing *Virgil* expresth in this Verse;

*Insultare solo, & gressus glomerare superbo.*

But more plainly *Ovid*, the triumph of the conquering Horse; saying,

*Hic generosus bonus & gloria major equorum;  
Nem captum animis palmam, gaudetque triumpho,  
Sed septem spatia citro mernere coronam.  
Nonne vides victor quanto sublimius altum  
Attollat caput, & vulgus venditis auris,  
Celsare cum caelo decoratur terga leone,  
Quam tumidus, quantoque vomis spectabilis actus;  
Compescatque solum, generoso consilia pulsi,  
Vngula sub spoliis graviter redeuntis opimis.*

And *Pliny* affirmeth that when they are joyned together in Chariots, they understand their encouragements of glory and commendation: and therefore there is not any beast of so high a stomach as a Horse.

### Of the natural disposition of Horses.

They love wet places and bathes, for which cause they are called *Philolatre*, they also love musick, as hath been already declared, and the whole host of Army or the *Sybarites*, taught their Horses to dance at the sound of a Pipe and *Calvus* writeth hereof in this manner, So great (saith he) was the riot and wantonness of the *Sybarites*, that at their common feasts they brought in Horses to dance before men; which thing being known by the *Croniatae*, they offered them War, and agreed, upon the fight: whereupon in the day of battle, the *Croniatae* brought with them divers Pipes and Minstrels, who upon a sign given to them, sounded their instruments, whereupon the *Sybarites* Horses came running and dancing among their adversaries, and so betrayed themselves and their Riders to the enemy.

The like story is reported by *Athenaeus*, of the people called *Cardiani*; for they also taught their Horses to dance upon their hinder legs, and to work many strange feats with their fore-feet, at the hearing of certain measures played upon Pipes.

The *Bisfalians* waged War against the *Cardians*; and they had to their Captain a certain man called *A History*. *Onuris*, who when he was a Boy was sold to *Cardia*, and there he served with a Barber: In the time of his service he oftentimes heard, that the Oracle had foretold, how the *Cardians* should be overcome by the *Bisfalians*; and therefore he to prevent the worst; run away from his Master, and came home safe to *Bisfalia* his own Countrey, and was by his Countrey-men created Captain of all their warlike forces: he understanding what tricks the *Cardians* taught their Horses in dancing, brought out of *Cardia* certain Pipes, and taught divers *Bisfalians* to sound and play the measures upon them, which the *Cardians* taught their Horses: whereupon when as they joyned battle with the *Cardians* Horses (for all the force of the *Cardians* lay in their Horses) he commanded his Piping *Bisfalians* to sound their musick, which the Horses understood, who presently stood up upon their hinder legs, and would not fight any more, or go any further, so as they were overthrown by their adversaries.

They have also a singular pleasure in publick spectacles, and therefore have been observed to be *Solimus*. provoked not only by pipes or such instrumentall musick, but also by Songs or vocall harmony, by variety of colours, and by burning Torches. *Dion* also writeth that he saw a Horse taught to know and to do reverence to a King.

And *Tertius* affirmeth that he saw a Horse at *Paris* at the triumphs, Tilt, and Turnaments made for the marriage of *Lewis* the twelfth to *Mary*, a Lady of *Britain*, which being commanded by his Rider to salute the Queen, presently did bend both his knees unto her, and then rose again running away as fast as a bird could flie.

*Homer* seemeth also to affirm that there are in Horses divine qualities, understanding things to come, for being tyed to their mangers they mourned for the death of *Patroclus*, and also fore shewed *Achilles* what should happen unto him: for which cause *Pliny* saith of them, that they lament their lost Masters with tears, and foreknow battles; *Virgil* writeth thus of the Horse of *Pallas*;

*Possit bellator equus, possit insignibus, Eikon  
Is laetymans, guttisque humida grandibus ira.*

*Ascanius* affirmeth, that *Cesar* three dayes before he died, found his ambling Nag weeping in the stable, which was a token of his ensuing death, which thing I should not believe, except *Tranquillus* in the life of *Cesar*, had related the same thing, and he addeth moreover, that the Horses which were consecrated to *Mars* for passing over *Rubicon*, being let to run wilde abroad without their Masters, because no man might meddle with the Horses of the Gods, were found to weep abundantly, and to abstain from all meat. Whereof there could be no cause given, but the love of their former Masters. It is also reported of *Rodatus*, a Captain to *Charles* the great, who after the death of the Emperour was made a Monk, his Horse would never suffer any to come on his back except his Master, who likewise had abstained from riding many years: But it happened that, certain *Pagani* brake in upon the said Monastery, whereupon poor *Rodatus* went unto his Horse, who after many years discontinuance, willingly took up his aged Master upon his back, and so carried him until he triumped over his adversaries; and no marvel, for Dogs and Horses are most loving to men, if they be brought up carefully, and liberally, they recompense the good turns of their benefactors. It is observed in the nature of Horses, that they seldom hurt a man or child, except in their madness, yet are there malicious Horses as well as men. It is reported by *Pliny* and *Tzetzis*, that when a foal hath lost his dam, the residue of the Mares which give suck, bring it up, and that they are seldom found at variance, except the barren Mares pull away the foals from the natural dams. For there is, no creature so loving to their young ones, as are Mares, neither any so desirous of young; for which cause, when they are barren themselves, they labour to steal them away from others.

They which were wont to races, would perform it upon Mares newly delivered of foals they eyed *Aristotle*, up the foals at home, and led the Mares to the beginning of the race, making the end thereof at the foals stable; and so putting the Beast forward, the runneth homewards more speedily for the remembrance of her foal.

of the fear of Horses, and their enemies in nature.

Horses are afraid of Elephants in battle, and likewise of a Camel; for which cause when *Cyrus* fought against *Croesus*, he overthrew his Horse by the sight of Camels; for a Horse cannot abide to look upon a Camel. If a Horse tread in the foot-path of a Wolfe, he presently falleth to be astonied: Likewise if two or more drawing a Chariot, come into the place where a Wolfe hath trod, they stand so still as if the Chariot and they were frozen to the earth, faith *Plinius* and *Pliny*. *Æsop* also affirmeth the same thing of a Horse treading in a Bears footsteps, and assigneth the reason to be in some secret, betwixt the feet of both Beasts.

We have shewed already, that if a Mare strike a Wolf, or tread in the foot-steps thereof, presently calteth her Foal; and therefore the Egyptians, when they signifie a Woman suffering abortment, picture a Mare kicking a Wolf. The *Desertian* Horses being not Gelded, dare fight with Lions, but being gelded, like all other Horses, they are so afraid of Lions, that no stripes, or spurs, is able to bring them in their presence, the *Caropian* Horses excepted.

All kinde of Swine are enemies to Horses; the *Eltridge* also is so feared of a Horse, that the Horse dares not appear in his presence. The like difference also is betwixt a Horse and a Bear. There is a Bird which is called *Anelorus*, which neyeth like a Horse, flying about; the Horse doth many times drive it away, but because it is somewhat blind, and cannot see perfectly, therefore the Horse doth oftentimes catch it, and devour it, hating his own voice in a creature so unlike himself.

It is reported by *Aristotle*, that the Bustard loveth a Horse exceedingly, for seeing other Beasts feeding in the Pastures, despiseth and abhorreth them, but as soon as ever it seeth a Horse, it flyeth unto him for joy, although the Horse run away from it; and therefore the Egyptians, when they see a weak man driving away a stronger, they picture a Bustard flying to a Horse. Horses are also taught to leap, if a Man take him by the reins, and go over the ditch before him, holding him fast, and pulling him to him. But if he be unwilling, then let another come behind him and strike him with a whip, or with a rod, so will he leap over without delay; and thus when you have used him to leap empty, likewise accustom him loaded. First over smaller, and then over greater hedges. But at the beginning let him leap in soft ground, and being well practised in harder; and when he begeth to leap, let the Rider put spurs unto him, for so will he performe his leap with more safety to himself and the Rider; and by custom he may leap and run as well down the hill as up hill; and therefore the *Persians*, and *Nodians* use and accustom their Horses to run both down hill, and up hill.

Thele Epithets following, do serve to expresse the nature of Horses; full of stomach, generous, magnanimous, strong, ardent, sharp, covetous, fierce, bolde, threatening, terrible, foaming; such were the Horses of *Acarnania*, *Argis*, *Mycenæ*, *Asia*, *Elis*, *Epid*, *Spain*, *Thessali*, *Parthia*, of which Countrey was *Bucphalus*, the Horse of *Alexander*. *Babylonia* Province addicted to *Mabon*, hath many of these excellent, great and swift Horses, whose hoofs are so hard, that they need no iron shoes, although they travel over rocks and mountains.

The *Arabians* also have such Horses, and in the Kingdom of *Senega*, they have no breed of Horses at all, by reason of the heat of their Countrey, which doth not only burn up all pasture, but also cause Horses to fall into the Strangury; for which cause they do buy Horses very dear, using in stead of Hay, the stalkes of Pease dried and cut asunder, and Miller seed in stead of Oats, wherewithal they grow exceeding fat; and the love of that people is so great to Horses, that they give for a Horse furnished nine bond-slaves, or if it please them well, fourteen; but when they have bought their Horses, they send for Witches, and observe therein this ceremony.

They make a burning fire with sticks, putting therein certain fuming herbs, afterwards they take the Horse by the bridle, and set him over the smoaking fire, anointing him with a very thin ointment, muttering secretly certain charmes, and afterwards hanging other charmes about their Neck in a red skin, shut them up close for fifteen dayes together: then did they bring them forth, affirming that by this means they are made more valiant and courageous in war.

### The love and knowledge of Horses to men.

And to this discourse of Horses belongeth their nature, either of loving or killing men. Of the nature of *Alexanders* Horse before spoken of, called *Bucphalus*, is sufficiently said, except this may be added, that so long as he was naked and without furniture, he would suffer any man to come on his back; but afterwards being saddled and furnished, he could endure none but *Alexander* his Master: For if any other had offered to come near him, for to ride him, he first of all certified him with his neighing voice, and afterwards trod him under foot if he ran not away. When *Alexander* was in the *Indian* Wars, and riding upon this Horse in a certain battle, performed many valiant acts, and through his own providence, fell into an ambush of his foes, from which he had never been delivered alive, but for the pusillancy of his Horse, who seeing his Master beset with so many enemies, received the Darts into his own body, and so with violence pressed through the middle

middle of his enemies, having lost much blood, and received many wounds, ready to die for pain; not once slayed his course till he had brought his Master the King safe out of the battle, and for him on the grounds, which being performed, in the same place he gave up the ghost and dyed, as if he were comforting himself with this service) that by his own death he had saved the life of such a King: for which cause, after *Alexander* had gotten victory, in that very place where his Horse died, he built a City and called it *Phocælon*.

It is also reported, that when *Leinius* the Emperour would have had his Horses to eat in pieces the Daughter, because she was a Christian, he himself was by one of them bitten to death. *Nocles* the Son of *Themistocles* perished by the biting of a Horse: neither herein only is the nature of Horses terrible, because also they have been taught to tear men in pieces: for it is said that *Bisrin* and *Dionides* did feed their Horses with mans flesh; and therefore *Hercules* took the like revenge of *Dionides*, for he gave him to his Horses to be eaten: of *Dionides* were these verses made:

*Ut qui terribiles pro gramen habentibus herbis,  
Lupum humano viscere pavit equos.*

The like also is reported of *Glaucom* (the Son of *Sisyphus*) who fed Horses with mans flesh at *Pelops*, a City of *Bœotia*, and afterward when he could make no more provision for them, they devoured their Master: whereof *Virgil* writeth thus:

*Et mentem Venus ipsa dedidit, quo tempore Glauco  
Palmides molis membra absumpserat quadrage.*

But this is thought a fiction, to expresse them which by feeding and keeping of Horses, consume their wealth and substance. And thus much for the natural inclination of Horses.

### Of several kinde of Horses.

There be several kinds of Horses which require a particular tractate by themselves, and first of all the Martial or great warlike Horse, which for profit the Poet coupleth with Sheep:

*Lanifera pecudes & equorum bellica proles.*

The parts of this Horse are already described in the Stallion, the residue may be supplied out of *Xenophon* and *Oppianus*. He must be of a singular courage and docibility, without maim, fear, or other such infirmity.

He must be able to run up and down the steepest hills, to leap, and bite, and fight in battle, but with the direction of his Rider: for by these is both the strength of his body and minde discovered; and above all, such a one as will never refuse to labour, though the day be spent: wherefore the Rider must first look to the institution and first instruction of his Horse, for knowledge in martiall affaires is not natural in Men or Horses, and therefore except information and practice adorne nature, it cannot be, but either by fear or heady stubbornness, they will overthrow themselves and their Riders. First of all they must not be Geldings, because they are fearful, but they must be such as will rejoyce and gather stomach at the voice of musick, or Trumpets, and at the ringing of Armour: they must not be afraid of other Horses, and refuse to combat, but be able to leap high and far, and rush into the battle, fighting (as is said) with heels and mouth.

The principal things which he must learn are these: first to have a lofty and flexible neck, and also to be free, not needing the spur; for if he be sluggish and need often agitation to and fro by the hand of the Rider, or else if he be full of stomach and fullen, so as he will do nothing but by flattery and fair speeches, he much troubleth the minde of the Rider: but if he run into the battle with the same outward aspect of body, as he doth unto a flock or company of Mares, with loud voice, high neck, willing mind, and great force, so shall he be both terrible to look upon, and valiantly puissant in his combat. Wherefore the Rider must so carry his hand, as the reins may draw in the Horses neck, and not so easily, as in a common travelling Gelding, but rather sharply to his grievance a little, by which he will be taught as it were by signes and tokens to fight, stand still, or run away.

The manner of his institution may be this: after the dressing and furnishing of your Horse as The Institution of a warlike Horse.  
and likewise the backing, first of all move him to walk your Horse gently, until he be well acquainted with the carriage of your hand and whole body, and afterward accustom him to greater and speedier pace or exercise, use him also to run longer races, and also by drawing in your hand to stay or stop suddenly; for there are Horses so instructed, that they can stay themselves in their speediest course upon an instant, without any circumambulation, shaking off the violence of their course, like an ordinary trotting Nag, by mounting up a little with their forefeet.

And alway it is to be remembered that after the mounting on horse-back, you must first of all begin on the left hand, bending your hand that way, and also to the right hand when you would have your Horse to turn on that side. And above all other things Horses are delighted with crooked bending.

Men have per-  
ished by rail-  
rocks in riding.

The honour of  
Horsemanship.

Festus.

Suidas.

The Athenian  
Orders.

Aristophanes.  
Calvus.  
Suidas.

hending and round courses, such as strong circles and Rings, and he was accounted to run from other Horses leaving them behind him, and likewise turning towards them and making as if he were to them: but he should long and precipitate courses, such as hunters make without guiding body, hand or Horse, are ever to be avoided, for many men have perished from this. Horses, as the Poets witness of Niphus, Lucretius, Liger, Clonius, Remulus, Amicus, and also among the Historians, Agnor, Falso of Jerusalem, Philip son of Ludovicus, King of France, and the King of Spain.

Of Horse-men, and the orders of Chivalry and Knighthood.

The principal Horse-men of the world celebrated in Horses for training, ruling and guiding their Horses according to the art of War, may for the dignity of Knighthood (whereas what they are honoured) and from whom that Equestrial order is derived, be recited in this place. It is testified by Sponius, that the Roman Equestrial order, was in the middle betwixt the Senators and the common people, for at the first there was no difference betwixt Equites and Judices, for both of them had for a badge, cognifiance, or note of their honour, power to wear a ring of gold, and in the Consulship of Marcus Cicero the title was turned to Equestrial, or name of a Knight, or man at Arms, by that means reconciling himself to the Senate, and affirming that he was derived from that order, and from that time came the Equestrian order, being, as is said before, the people, and recorded after the people, because of the latter creation thereof: yet had they not their beginning at that time, but only now they first came into the orders of the Common-wealth; for they were called Ceteri under Romulus, of one Ceter, who at the coming in of Romulus from Remus, and he was made the chief Judge of three hundred. They were afterward called Equestrian, either because they swayed the minds of them whom they judged, or else which is more probable, because of martialling and instructing their Horses for war: afterward because they took a great company of horse-men, without all aid of footmen, at the City Trifolium in Thracia, they were called Trifoliani, and Trifoliani, and yet some ignorant persons honoured with the title of Trifoliani in remembrance of that victory, were ashamed thereof as unworthy their dignities.

They were forbidden to wear purple like as were the Senators, and their golden Ring was a badge both of Peace and War. The Master of the Horse among the Romans, called by the Greeks, Hipparchus, and by the Latins, Magister Equitum, was a degree of honour next to the Dictator, and the Dictator made the first Master of horse-men, who was called Spurius, and set him in place next to himself. These Equestrian men or Knights of State were wont to be publicans at the least, and it was ordained that no man should be called into that order, except both he, his Father, and Grandfather were free men, and were worth in value twenty thousand pounds Turn and Thurius made this law, but afterward it grew remissive, not observed: whereby both Senators and Scribes were rewarded with this dignity from the Emperour, for Orations and pleasing speeches: yet were the Decurial Judges chosen out of this rank, for indeed by primary initiation, they were the flower and seedling of the Roman Gentry. Pliny complaineth that this dignity which was wont to be a reward for Military men, who had adventured their lives for the honour of their Country, was now bestowed corruptly, and for money upon mean bribing persons. It should seem they had every one a Horse of honour given to him for his note, for if one of them had grown fat and unweedy, not able to manage and govern this Horse, it was taken from him. And Cato took away the Horse from Scipio Asiaticus, because he had intercepted money, and from hence came the terms of their allowance, as Equites ei, for that money which was paid for a Horse to one Knight, and Periculum ei, for a double fee to an Equestrial man.

Among the Athenians, the highest order was of them which were called Pentactenarii, which had plowed so much land as had sowed an 100 bushels of Corn: and the next degree were their Equites, Knights, or Horse-men, because for the defence of their City, they were able every one to furnish a Horse of war. There were of these in ancient time but 600, and afterward they were increased unto 1200. and the sacrifices which were made for their pomp and triumphs, were called Hippades: and they had liberty to nourish their long hair which was forbidden to other men, and their tax to the sacrifice was at the least half a talent, (which is at the least 300 Crowns) and this sacrifice was made for the health of their Horses. There were two Masters created over these, to wage and order war; and ten inferior Governours or Wardens to look to the provision and nourishing of Horses.

Among the Lacedaemonians they had four Governments; the Monarchy for the Kings, the Aristocracy for the Old-men, the Oligarchie for their Equestrian or Commissioners, the Democracy for their Young-men, which governed, managed, and instructed Horses. Nestor that ancient Knight was commended for his skill, and had therefore given him the title of Hippasus.

Among the Caledonians there was not a rich man but they took him into this Order, and the Cretans likewise did ever highly account heretofore, and made it their highest degree of honour, for even the Romans did sometime govern whole Provinces with no other than these; and Egypt had this in peculiar, that no other Order, no not a Senator might be President or Govern over them. The Athenians had this degree in high estimate, like as the Germans their Batavi or States. The Citizens of Capua were and are disguised with a perpetuity of this honour, because in the Latin war, they did not revolt from the Romans; and among all other, the Gaditan were most honoured herewith,

herewith, for at one time and for one battle, they created 400. This title hath spread and adorned itself with many more degrees, as that among the Romans, Cabbalarii and Equites aurati, and such as are Knights of Jerusalem and divers others, some for Religion, and some for feats of Armes: whereas the Persians used a certain kind of garment in War, called Mandium, from hence cometh the Knights upper garment to be called a mantle, for all the Persians were Horsemen. The noblest Horses and such as could run most speedily and swiftly were joyned together in chariots for races, courses, spectacles, games and combats, for great values and prizes.

Nonne vides? cum pueri puerum placuisse palmas.

Perseus, & equitum non vultu mioris.

And again Ovid saith;

Nonne nobilium vultu spectatur equorum?

And Horace;

Nec te nobilium fugiat certamen equorum.

There was one Amieris a Cyprian most skilful in this practice, and according to the vain humors of men, was not a little proud hereof, and for his love to Rome would needs in the Academy shew him and his Scholars his skill, and therefore joyning his Horses and Chariot together, made many courses with such an even and delineate proportion, that his Horses and wheels never wandered a hair breadth from the circle or place limited, but always kept the flameroad and footsteps, whereas every one marvelled: but Plato reproved the double diligence and vain practice of the man, saying to him in this manner. It cannot be, that a man which hath travelled and laboured so much in an art or skill of no worth or use in the Common-wealth, that ever he can addict his mind to grave, serious and profitable business, for while he applyeth all his parts and powers of body and soul to this, he is the less able and more unapt to those things which are alone more worthy of admiration.

The ancient custom was, to use other mens Horses in this combat, and therefore in the funeral of Patroclus, Homer bringeth in Menelaus, riding his Horse of Agamemnon. There were four several places wherein these games of Horses and Chariots were wont to be observed and kept, and they were called after these places, Olympia, Pythia, Nemea, and Isthmia, and of all these the Olympiads were the chief, whereas all Horses are full, for they were celebrated in Olympus every fifth year inclusively, that is, after the end of every fourth year.

The writers of Chronicles do agree that the games of Olympus were first instituted by Hercules in the 2752. year of the world, beginning the world from Noahs flood, and they begin to record and number the first Olympiad to be about the 3185. year of the world, about seventeen year before the building of Rome.

There were of these Olympiads 328. and the last of these by computation or account fell about the year of our Lord 534. after the birth of Jesus Christ the blessed Saviour of the world.

The perfection of these games began the twenty five Olympiad, at what time Pythagoras the Theban was pronounced victor: for then were swift Horses brought into the games, and were called Telsus, the first, perfect in agility and growth; and these are called by Pindarus, Monopystia; afterward came in Olympia with two Horses, and in succession both Colts, Mares, and Mules: their courses are thus expressed by Virgil;

Et quo amicus amicumque moribus.

Et qui cuique dolor vultu, qua gloria palmas;

Nonne vides? cum pueri puerum placuisse palmas.

Corripere, ruuntque effusi carcere currus.

Cum spes interit invicem, equalem iugum horum.

Corda pavore pulsant, illi infans verbera tora.

Et prout dant lora: volat ut feridus exilis.

Jamque humilis, jamque stans sublimis videtur.

Aer per vacuum ferri atque affurgere in aerem.

Nec mora, nec requies: at subito nimbus arina.

Tollitur: humilem sumit, statumque sequitur.

Tantum amor laudum, tanta est victoria cura.

Sin ad bella magis studium iugumque feroces,

Aur Alphaevri prelabi flumina Pylo.

Et Troia in luto currus agitare volantes.

Primum equi labor est, animos atque arma videre.

Bellumque, litusque patri, trahunt gementem.

Perre rotam, & stabili frenos audire sonantes.

And

And Horace expresseth it in this manner:

Sunt qui curriculo pulcherrimo Olympicum  
Collegisse iuvas, metaque feruile  
Evitata, rote; palmaque nobilis  
Terrarum dominos eodem ad deos.

Women were wont to be excluded from these games, untill *Cynisca* the daughter of *Archidamus* King of the *Spartans*, first of all other women nourished and trained Horses for these curule and Chariot games, and when she brought her Horses to *Olympus*, she obtained the prize; therefore her Horses were consecrated to *Jupiter Olympius*, and their figures remained in Brasse in his Temple.

Pliny.

It is also said that *Ecbaretas* a *Thessalian* overcame in the *Olympian* games with a Mare great with foal: And it is also reported that *Miliades* the son of *Cimon Stesagoras* (one of the ten Captains of *Athen*) ran away from *Pisistratus* the Tyrant, and in the time of his absence, he was twice Victor at *Olympus* by four Mares, the first time he bestowed the glory upon his cousin German *Milades*, his mothers brothers son, and the second time he took it to himself; for which cause he was slain by the sons of *Pisistratus*; his Mares were also buried over against him, with an inscription, that they had won four games in *Olympus*, so that it appeared, he ran divers times and never missed victory. At *Athen* they observed these courtes with Horses in honour of *Theseus*, and called the place of the running, *Hippodromus*.

The *Latins* call it *Stadium*, and *Curriculum*, and it was appointed in some plain valley, according to the proverb, *Equus in planitiem*; in the midst whereof was a building called *Circus*, whereon the beholders stood to look upon the palfre, and there were also places to contain the Horses and Chariots, till they were turned out to run, (called *Curvus*) according to the verses of *Silius*:

Sic ubi propositi pice de carcere praecipos  
Ante suos in visor Equos.

And Horace also,

Ut cum carceribus missos rapit ungula curru,  
Instat equis auriga suos vincensibus, illum  
Præteritum temens extremos inter eunt.

And hereof came the proverb (*A carceribus ad calcem*), signifying from beginning of the race to the latter end. *Eriobolus* invented a Chariot called *Elarias*, and was the first that ever ran in *Olympus* with four Horses in the same, of whom *Virgill* writeth thus:

Primus Eriobolus curru & quatuor ausus  
Iungere Equos rapidisque insistere visor.

And from hence came the team *Quadriga*, for a Chariot with four Horses. There was a Chariot in *Athen* drawn by one Horse, and the games thereof were called *Polemysteria*. Likewise at *Rome* in the Consul-fests celebrated for the honour of *Nephtis*, they ran with Horses both joyned and single.

There were likewise games at *Rome*, called *Equitia*, and *Equitria*, celebrated every year; the twelfth of the Calends of *May*, wherein after the Horses they coured Foxes ryed to pices of wood set on fire; this is called in *Latine* also *Turnamentum*; and in *Italian* by *Scoppa*, *Hagistras*; and in *French* *Fermierim*. There is also a play with Horses for children call'd *Troia*, first invented by *Aescnius*, when he besieged *Albe*, and by him brought and taught to the *Romans*, of which *Virgill* speaketh, saying:

Incedunt pueri, pariterque ante ora parentum  
Frenatis lucent in equis;  
Cornea bina ferunt præfixa bastila ferro;  
Pars levis humero pharetra;

Ter equitum numero turme, ternique vocatus  
Ductores: pueri bissesti quemque secuti.

Signum clamore parat;

*Egyptides* longe dedit, infansque flagello.

Olli discurre repares, alique agmine terri.

Diducit solvere choris, rursusque vocat

Convertere vias, infestaque tela tulere.

Inde alios ineunt cursus, atque recursum

Adversis spatis, alternosque orbibus orbes

Impediunt, pugnaque clementi simulacra sub armis.

Et nunc terga: fuge nudam, nunc spicula vertunt.

Infensi: facta pariter nunc pace feruntur.

Hunc morem cursus, atque hoc certamina primus

*Aescnius*, longam muris cum cingeres *Albam*

*Relat.*

*Relat.* & pueri, pariterque ante ora parentum  
*Relat.* & pueri, pariterque ante ora parentum  
*Relat.* & pueri, pariterque ante ora parentum  
*Relat.* & pueri, pariterque ante ora parentum

### Of the greatest Horse-masters and nourishers of Horses.

It is reported of King *Solomon*, that he had forty thousand stables of Horses for Chariots, and twelve thousand for war. The *Lybians* when they went to war, did fight out of their Chariots, and therefore they were said to fight upon two Horses. The *Centaurs* were the first that ever taught men to fight on Horse-back, and the *Roman* *Turris* consisted of two and thirty Horse-men, the Captain whereof was called *Braville*. The people of *Nomad* called *Surgati*, brought eight thousand Horse-men at one time into the field, which neither used armour, nor brags, nor iron, except only their daggers, and a rope of leather thongs, wherewithal they entered the battail, and joyning with their enemy, they made certain gins, or loops thereupon, which they cast upon the necks of Horses and men, and so with multitudes drew them unto them, in which draught they strangled them.

The *Indians* use the very self same Armour on Horse-back that they do on foot, but yet they lead empty Horses and Chariots to leap up and down upon, and to refresh their fighting Horses, and the number of their Horses were at one time fourcore thousand.

When *Pharnaces* the *Arabian*, was riding on Horse-back, there was a Dog ran betwix his Horses legs, wherewithall the Horse being amazed, suddenly leaped upright, and cast off his Rider, who being bruised with the fall, fell into a Consumption: whereupon the Servant of the commandment of their Master, brought the said Horse into the place where he cast his Rider, and there cut off his legs about the knees. There was also a fashion for Horses to fight in battails without bridles: For *Fulvius Flaccus*, when the *Romans* overthrew the *Celtiberians* in *Spain*, caused them to pull off their bridles from their Horses, that so they might run with all violence, without restraint of Riders upon their enemies; whereupon followed victory: for many times it falleth out that the Horse hath more courage than his Rider, wherefore a good Horse-man must have skill to annoy his enemy, and defend himself; and likewise, to make his Horse to come off and on without fear or dread, according to necessity.

There is a proverb in *Greek*, (*Chori bippe*) that is, (*Scusem equites*) the Horsemen are asunder, whereof *Sulus* giveth this reason: when *Darius* invaded the territory of the *Athenians* ranging and destroying at his pleasure, no man daring to abide his forces, at his departure, the *Ionians* clumed up into trees, and signified unto the *Athenians*, that the Horse-men had broken rank and were asunder. Whereupon *Miltiades* set upon the scattered company, and obtained a noble victory.

### Of fighting in War upon Horses.

The most cruel and fearful kinde of fight, is the arming of Horses, which were called in ancient time *Cataphrati*, and *Clibanarii*, and *Ancusfrati*, and *Feracarii*, fighting first of all with spear, and afterwards with sword and shield, casting sometimes also darts at one another, and bearing bows to shoot arrows, their Horses making room for them, which way soever they went; for with sharp pikes and other crooked-keen-cutting-instruments, fastened to their Armour or Chariots wheels, in the violence of their courses, they wounded, killed, over-turned, or cut asunder whatsoever flesh came in their reach.

The ancient Horsemen of the *Romans* had no breast-plates, (as *Polibius* affirmeth) and therefore they were naked in their fore-parts, providing for the danger that was behind them, and defending their breast, by their own celerity: their shields were made of Ox skins plighted and pasted together, being a little round in compass like the fashion of a mans belly.

There was also great use of swift Horses in War, for the *Roman* Souldiers carryed with them two Horses a peece, being taught and exercised like *Indians*, when they had need to sit, to leap upon their empty Horse for their sparing of the other; and they were therefore called *Amphippi*, being apt to carry their Masters out of danger, and from hence (*Polibius* saith) the *Romans* took the pattern of their *Phalanx*, (called *Antistomum*) with which they used to terrifie the *Barbarians*, setting their Horses in a double front, so as they appeared headed both ways; and this was also the custom of all the *Germans*, when the number of their Horse-men was not equal, they mingled the Foot-men, with their Light-horses, who being experienced to run suddenly with the Horse men leaped into the battail and surprized the enemies flying away: and the same fashion did the *Spaniards* also use. (*Strabo* saith) for the terrifying of their enemies, making the Horse-men, to fall into the battail among the Horse-men.

Those which did shoot Darts on Horse-back, were called *Hippotoxotæ*, and therefore *Arrianus* in his discourse of Birds, calleth Hawks by that name, for the resemblance betwix them and Horses, bearing their Riders. The Hawks are so called in swiftness of their course; and because the talons of the Hawk are crooked like bows. *Arrianus* writeth that the Horse-men of *Alexander* carryed spears in their hands fourteen cubits long, whereunto I cannot consent; for eight cubits is a common size, as much as any Souldier on Horse-back is able to use.



gish Horse, and not for the free and full of life; for such a Horse being pricked therewith, runneth forth rather with rage and disdain, then for love of the journey, and many times the torment thereof maketh him by kicking out his heels to cast off his Rider.

Lastly, he must have regard to his Saddle, whereon he must sit: for the Barbarians did use to ride upon bare Horses backs; but since that time, the wiser sort of Horse-men have invented a seat for their own security. Maritall writeth hereof thus:

*Stragula succindi venator sume veredi,  
Nam solet a mudo surgere siccus equo.*

### of Hunting Horses.

Hunting Horses because of their swiftness, were wont to be called *Veredi*; according to the saying: *Sunt et veredi, cursu peritices*: Although they use this kinde also for posts, and performance of speedy journeys. The males are much better then the females, and therefore they seldom use Mares in hunting, because they are not so well able to leap, or endure the Woods, for which cause *Gratius* writeth in this manner of them;

*Restat equos finire notis, quos arma Diana  
Admittant: non omne meae genus aude in artem.  
Est vitium ex animo: sunt quot imbellia fallant  
Corpora: praevientis quondam est incommoda virtus.*

*Oppianus* in his discourse of hunting Horses, (as we have said already) adviseth to make choice of them by the colour, unto whom *Gratius* consenteth, saying:

*Venanti melius pugnant color, optima nigri.*

They that are of blewish colour, having variable spotted legs (he saith) are fittest to hunt Harts: they that are of a bright gray, to hunt Bears, and Leopards; they that are bay, or of a reddish colour, to hunt the Boars: they that are black, having glazen eyes, are good against Lyons: and thus much for the hunting Horses.

### of Coursers, or swift light running Horses.

After the use of Wagons, and Chariots, which men had invented for their ease in travel, and growing to be weary thereof, by reason of many discomforts, they came also to the use of single Horses, which therefore they called Coursers, and now a days a Horse for Saddle, whereupon men perform their journeys; and the Poets say, the inventor hereof was *Bellerophon* the son of *Mercurius*, to whom his father gave *Pegasus* the flying Horse; which therefore they describe with wings, and place for a star in Heaven like an Angel, because of his incredible celerity: others attribute it to the invention of *Sesostris*, otherwise called *Sesometosis*, a King of Egypt; some to *Orus*, when he waged war against his brother *Typhon*; For these Horses, are no less profitable in war, then in peace, although none use them in these days, but common Souldiers; yet in ancient time the greatest Nobles rode upon them. The Emperor *Probus* had one of these Horses, which was nothing comely, nor very high, yet would he endure ordinary journeys, to run a hundred mile a day, whereupon his Master was wont to say merrily, that he was better for a flying, then a fighting Souldier. The Horses of *Spain* are of this kinde, which they call *Jennets*, of *Genibus* their knees; because when the Rider is on their backs, he must hold his knees close to the Saddle and sides, for his better ease. Like unto these are the *Barbary* Horses, whom they geld, to keep them from the hardness of the Nerves, which happeneth unto them in their heat and travel. There are a kinde of Horses called *Lupifera*, and the reason of this name is, as some say; because when they were Foals, they escaped the teeth of Wolves, being set on by them: and therefore they run the more speedily to their dying day, for the wounds of Wolves make a Horse light footed; but this is not likely, for fear cannot put that into them which is not bred of nature; even as we say, that *Vulcy* by avoiding *Circus* cup, was therefore made wise; but rather on the contrary; because he was wise, therefore he did avoid *Circus* cup; so likewise we say, that these Horses are not lighter of foot, nor fuller of courage, because they were set upon by Wolves, and delivered by fear; but because nature hath framed them, nimble, valiant, and courageous; therefore they did avoid the Wolf.

*Allianus* also saith, that these Horses had a wonderful knowledge, and sagacity, to discern betwixt *Graecians* and other Nations; for when a *Graecian* came unto them, they loved them, stood still, and took meat at their hands; but if a *Barbarian*, or stranger came unto them, they discerned them by their nose, as a Dog doth the foot-steps of a Beast, lifting up their voyce, they ran as fast away from them as they would from any ravening Beast. These loved not only their familiars; but above all other things to be neat, fine, and cleanly in Chariots: For if at any time they came through water, drawing of a Chariot, they took a pride in cleansing themselves from all durt and filthiness, cleaving to their legs or face. And that which is more strange, they were unwilling in race, to be

slayed or taken out thereof; as appeared by this story, related by *Festus*. There is saith he in *Aome* a great gate called *Katumenus*, which took his name from the death of a young man, an *Heirathian*, who perished there in a race of Chariots, being Conqueror, because his Horses would not stay until they came into the Capitol, and saw the framed earthen Chariots, which were placed in the porch of *Jupiter's* Temple by the *Romans*, and were appointed to be fashioned in earth by the hand of a cunning Potter, the which being wrought in earth, and put into the furnace, they grew so great that they could not be taken out whole; at the sight of these, the Horses of *Katumenus* stood still, but first of all, their master was slain in the course by falling off.

The Horses of *Tartaria* are so incredibly swift, that they will go twenty German miles in one day. There was a race of Horses at *Venice* (called *Lupifera*) which were exceeding swift, and the common fame is, that they came upon this occasion. There was a certain merry fellow, which would become surety for every man, for which he was commonly jested at in the whole City. It fortuned on a day, as he travelled abroad in the Woods; that he met with certain Hunters that had taken a Wolf, they seeing him, asked him merrily, if he would be surety for the Wolf; and make good all his damages that he had done to their flocks, and foals, who instantly confessed he would undertake for the Wolf, if they would let him at liberty; the Hunters took his word; and gave the Wolf his life, whereupon he departed without thanks to the Hunters.

Afterward in remembrance of this good turn, he brought to the house of his surety a great company of Mares without mark or brand, which he received, and branded them with the Image of a Wolf, and they were therefore called *Lupifera*, from whom descended that gallant race of swift Horses among the *Veneti*: upon these ride the posts, carrying the letters of Kings and Emperors to the appointed places, and these are said to refuse copulation with any other Horses that are not of their own kinde and lineage.

The *Persian* Horses are also exceeding swift, which indeed have given name unto all others. The messengers of the great *Cam* King of *Tartaria*, have their posts appointed at every five and twenty miles end, of these running light Horses, that they ride upon them, two or three hundred miles a day: And the *Persian* couriers of *France*, by the like change of Horses, run from *Lyons* to *Rome* in five or six days.

The Epithets of a swift running courser are these, winged or wing-bearing, Lark-footed, breathing, speedy, light, stirred, covetous of race, flying, sweating, not slow, victorious, rash, violent, and *Pegasean*. *Virgil* also describeth a swift and sluggish Horse most excellently in these verses; sending one of them to the Ring, and victory of running, without respect of Country or food; they are to be praised for enriching his master, and the other for his dulness to the mill, the verses are these following.

*Nimpe volucrum  
Sic laudamus equum, facili cui plurima palma  
Fervet, et exultat rauce victoria Circus.  
Nobilis hic, quoniam venit de gramine, cuius  
Clara fuga ante alios, et primus in eoque pulvis,  
Sed venale pecus Corinthe, posteritas &*

*Hirpi, si vera iugo victoria sedet;  
Nil tibi majorem respice, gratia nulla  
Umbrarum, dominos pretis mutare jubentur  
Exiguus, trioque trahunt Ephedi colles  
Segnipedes, dignique molam versare Neptunia.*

One of these swift light Horses is not to be admitted to race or course until he be past three years old, and then may he be safely brought to the ring, and put to the stretching of his legs in a compelled or violent pace, as *Virgil* saith:

*Carpere non gyrum incipit gradibusque sonare  
Compositis, sinuque alterna volumina currum.*

*Pliny* affirmeth, that if the teeth of Wolves be tyed to these Horses, it will make them never to give over in race, and when the *Sarmatians* were to take long journeys, the day before they gave their Horses very little drink, and no meat at all, and so would they ride them an hundred and fifty miles out right.

The *Arabians* also in many regions use to ride upon Mares, upon whom they perform great journeys, and King *Darius* did also fight his battails upon Mares which had foals; for if at any time their affairs went to rack, and they in danger, the Mares in remembrance of their foals at home would carry them away more speedily then any other Horse: and thus much for the light or swift Horses.

### Of the Gelding.

They have used to lib their Horses, and take away their stones; and such an one is called in *Latin*, *Castratus*, or *Camberus*, which is derived of *Castrum*, because they were feared with hot irons, or else from the stronger boughs or branches of Vines, so called, because they were pruned. In *French*, *Caval Ogre*, *Gantier*, *Cheiron*, and *Sappa* doth interpret the Spanish, *Juneto*, to be a Gelding. It is said of *Cato Confrarius*, that he was carried and rode upon a Gelding; and of these the *Turkish* Horses receive the greatest commendations.



Crapaudus.

Forasmuch as many Horses by their legs and stones are made very fierce, truculent, and unruly, by taking away of them, they are made ferviceable and quiet, which before yeelded unto man very little profit; and this invention may seem first of all to be taken from them which feed divers together in one herd, being taught the intolerable rage of their stoned Horses towards their Collegues and guides; for abating whereof they took from them their male parts.

Camerarius.

Of the manner hereof you may read plentifully in *Rufus*, and he affirmeth that the *Scythians* and *Sarmatians*, who keep all their Horses in herds, were the first devisers thereof: For these people using to rob and forrage, were many times by the neighing of their unruly Horses discovered; for their property is to neigh not only at Mares, but also at every stranger that they see or winde, and their property they were so headstrong, that they would divers times carry away the Rider perforce, and against his will, to his own destruction, in the rage of their natural lust.

Camerarius.

If they be gelded under their dams when they suck, it is reported by some; that from such their teeth never fall away; and beside, in the heat of their course their nerves are not hardened, for which cause they are the best of all to run withal.

Livius.

They use to geld them in *March*, in the beginning of the Spring, afterward being well-nourished, they are no less strong, able and courageous than other unlibbed; also there is a ptey proverb, *Cuius ibi in Fosse*, a Gelding in a Ditch, which is then to be used, when a man undertaketh a business which he is not able to manage; for a Horse can do much in a plain, but nothing at all in a Ditch. It is reported that *Pubellius Taurus*, and *Cassius*, fought a combat on Horse-back near the City *Capua*, and when one had provoked another a good while in the plain fields, *Taurus* descended into a hollow way, telling his fellow combatant, that except he came down unto him, it would be a fight of Horses, and not of Horse-men; whereunto *Cassius* yeelded, and came down into the Ditch: at whom his adversary jesting, asking him if he did not know, that a Gelding could do nothing in a ditch, from whence came the common proverb aforesaid.

Festus.

There is also another proverb (*Camberius in Porta*) A Gelding in the gate, to signifie a man who after he had undertaken the performance of a great exploit, his heart faileth in the very entrance, for it is reported of one *Sulpicius Galba*, who riding out of the City, his Horse tyred in the gate.

There is likewise another adage in *Plautus*, which is this; *Crete hac mulier Camberius ritus eius somnia*. That is to say, this Woman sleeps standing like a new dressed Horse, and is applyed against them which in a kinde of foolish jesture shut their eyes when they talk or work: and thus much for the Gelding.

### Of Careering Horses for Pomp or Triumph.

The nature of these Horses is to lift up themselves and rise before, standing upon their hinder legs, which is not possible for any to do without a generous and gallant spirit, and also nimble and strong loins to bear up the hinder legs, for it is not as many suppose, that this power of rising before from the softness of his legs, but rather from his loins and hips betwixt his hinder legs, for when his mouth is a little checked with the bridle he presently bendeth his hinder pasterns and anckles, and so lifteth up his fore-parts, that his belly and yard do appear, and in doing hereof the Rider must not bear his hand hard, but give him the bridle, that so he may do it willingly and with greater grace of the beholders.

Xenophon.

There are some which teach Horses to lift up themselves by knocking their pasterns with a rod, which the Horse understandeth as well as he doth his race, when he is stroked on the back by the Rider. And in teaching of a Horse this feat, it must be observed, that he never have rest untill he have learned it, and that at certain signs and tokens, he be taught of his own accord to perform divers and sundry gestures: but if after long riding and copious labour, he begin to understand his Masters pleasure, and rise twice or thrice together, then you may give him the reins, nothing doubting but that he understandeth and will be obedient to the pleasure of the Rider. And in this kinde he is accounted the best careering Horse, which will rise high and oftneft together; neither is there any quality so commendable in a Horse as this, or that so draweth and (as it were) so imprisoneth the eyes of old and young, and other beholders, for which cause Martial Horses for service of War, are to be instructed herein; and thus much for this Horse.

### Of load or Pack-horses.

Where they keep Horses in herds and flocks, they have some which are not fit for the saddle, nor for the wars, and therefore are to be employed for the carrying of burthens, or to the Cart; although (as *Festus* saith) Mules were first used for carrying and draught; but forasmuch as all Nations have not Mules, they are therefore enforced to use Horses, and for this purpose the Geldings are much better than the stoned Horses; wherefore the Country-men of most Nations take Horses, for this purpose, after they be sold, past breeding, or have some other blemish in winde or limb, whereby they are disabled to travel under a man: for so great is the greediness of our age, that Horses are not spared so long as they be able to live; according to the common proverb, (*Asinus, equus, Mulis ferie nulla*) Horses, Mules, and Ases, keep no Holy-days: where the Law of God concerning the Sabbath is not observed; for the nourishing of Horses doth countervail the charges.

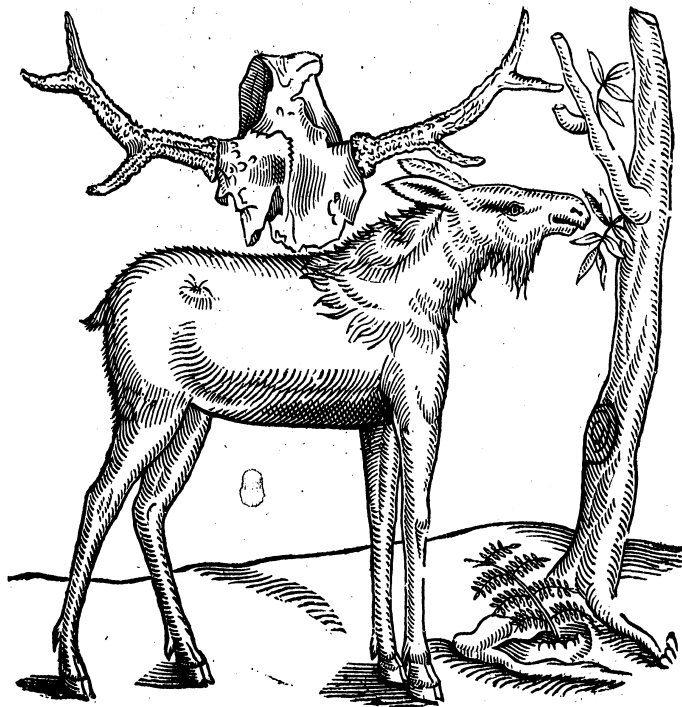
charges. Among these may be remembered those little Nags called *Hinnis*, and *Ginni*, spoken of already in the discourse of Ases, whereof some are generated betwixt a Horse and an As, and others fall to be very little, through some sickness which happeneth unto them in their dams belly: these are used with thorn manes according to the saying of *Propertius*: *huc mea detestata aulla est Cynthia manni*. They are used for pleasure, to carry the young sons of Noble-men and Gentle-men. There are also Horses called *Equi fundari*, because in their triumphs they were led with a halter next after the triumph.

### Of wilde-horses, the Sea-horse, and the Hart-horse, called Hippelaphus.

In the days of *Gordianus* there were brought to *Rome* forty wilde Horses, and in the map of *Gordianus* Wood, there were pictured three hundred. They are called in *Latine*, *Equiferti*; and in *Greek*, *Hippagroi*, they abound in *Spain*, and in the *Alpes*, and in the Deserts of *Æthiopia* there are many of them, which have two long venomous teeth standing out of their mouth: they differ also in their hoofs from other Horses, for they are cloven-footed like Harts, and they have a long mane growing all along their back to their tail: And if at any time the Inhabitants take them by gins and other flights, they fall so fullen, that they abstain from meat and drink, disdain to be kept in any servitude or bondage; the Wilde Horses of *India* have but one horn: In the *Alpes* they are of an ash-colour, with a black list down their backs. The wilde Horses of *Scythia*, near the River *Hypanis*, are clean white. The wilde Horses of *Syria* live in flocks and herds together, and in every herd they have one Captain or Master over the residue, and if it fortune that any of the younger Horses leap upon a Mare, this Captain-horse runneth after him, never giving over till he hath bit off his stones.

There are wilde Horses in *Brussels* which are like to other Horses in all parts, excepting their backs, which are so soft and weak, that they cannot endure to be fat upon, neither are they easily tamed, and the people of the Countrey eat their flesh: In *Polonia* there is a kinde of wilde Horse which hath horns like a Hart, and therefore I take it to be the same which is called *Hippelaphus*, whose picture is here described as it was taken here in *England*, by that learned Physician Doctor *Coy*.

The figure of HIPPELAPHUS.



This beast was brought out of *Norway*, having a mixt form, betwixt a Hart and a Horfe, having a well compacted body, a long and lean leg, a cloven hoof a short tail, and in all parts you would judge him to be a Hart, but in his head and ears you would judge him to be a Mule, and in his horns a Roe, the upper lip hanging over the nether almost as much as an Elks; his mane like a Horfes, but thinner and standing more upright, without other alteration from their shoulders to their tail, they have a like bristling mane growing on the back-bone, as long as their other hair; a bunch under their chaps, and upon that a bunch of shaggy hair, the hair about their shoulders is more longer then ordinary, but their necks so short, that they can neither drink their drink, nor eat their meat upon the ground, except they bend down upon their knees. The males in this kinde do only bear horns, and such as do not grow out of the Crowns of their head, but as it were out of the middle on either side, a little above the eyes, and so bend to the sides: They are sharp, and full of bunches like Harts, no where smooth but in the tops of the speers, and where the veins run to carry nutriment to their whole length, which is covered with a hairy skin: they are not so rough at the beginning, or at the first proffes, specially in the fore-part, as they are in the second, for that only is full of wrinkles: from the bottom to the middle they grow straight, but from thence they are a little recurved; they have only three speers or proffes, the two lower turn away, but the uppermost groweth upright to heaven; yet sometimes it falleth out (as the Keepers of the said Beast affirmed) that either by sickness, or else through want of food, the left horn hath but two branches: In length they are one *Roman* foot and a half, and one finger and a half in breadth, at the root two *Roman* palms. The top of one of the horns is distant from the top of the other three *Roman* feet and three fingers, and the lower speer of one horn is distant from the lower of the other, two *Roman* feet measured from the roots: in substance and colour they are like to Harts horns, they weighed together with the dry broken spongy bone of the fore-head, five pound and a half, and half an ounce, (I mean sixteen ounces to the pound;) they fall off every year in the month of *April*, like to Harts, and they are not hollow. The breadth of their fore-heads betwixt the horns is two *Roman* palms and a half, the top of the crown betwixt the horns is hollow on the hinder part, and in that fiece lyeth the brain which descendeth down to the middle region of the eyes.

Their teeth are like Harts, and inwardly in their cheeks they grow like furrows, bigger then in a Horfe; the tooth rising out sharp above the throat, as it should seem that none of his meat should fall thereinto unbruised. This Beast in young age is of a Mouse or Ass colour; but in his elder age it is more yellowish, especially in the extrem parts of his body: the hair smooth, but most of all on his legs, but under his belly, in the inner part of his knee, the top of his neck, breast, shoulders, and back-bone, not so smooth: In height it was about twenty two handfuls and three fingers, being much swifter then any Horfe; the female beareth every year, as the Keeper said in *Norway*, two at a time; but in *England* it brought forth but one.

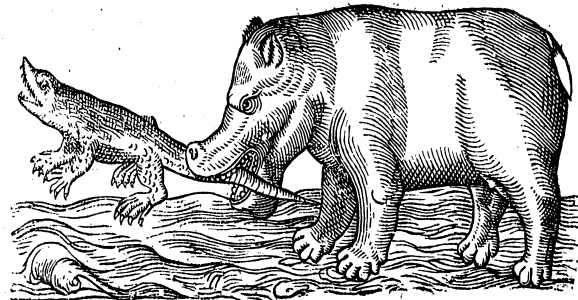
The flesh of it is black, and the fibres broad like an Oxes; but being dressed like Harts flesh and baked in an Oven, it tasted much sweeter. It eateth commonly grafs; but in *England* seldom after the fashion of Horfes, which forbear hay when they may have bread; but leaves, rindes of trees, bread and oats, are most acceptable unto it. It reacheth naturally thirty hand breadths high, but if any thing be higher which it doth affect; it standeth up upon the hinder-legs, and with the fore-legs there imbraceth or leaneth to the tree, and with his mouth biteth off his desire.

It drinketh water, and also *English* Ale in great plenty, yet without drunkenness; and there were that gave it Wine, but if it drink plentifully it became drunk. It is a most pleasant creature being tamed; but being wilde, is very fierce, and an enemy to mankind, persecuting men, not only when he seeth them by the eye, but also by the sagacity of his nose following by foot more certainly then any Horfe, for which cause they which kept them near the high ways, did every year cut off their horns with a saw: It setteth both upon Horfe and Foot-men; trampling and treading them under-foot whom he did over-match, when he smelleth a man before he seeth him, he uttereth a voice like the grunting of a Swine being without his female: it doth most naturally affect a woman, thrusting out his genital (which is like a Harts) as it is discerned sexes. In *Norway* they call it an *Elk*, or *Elind*, but it is plain they are deceived in so calling it, because it hath not the legs of an *Elk*, which never bend, nor yet the horns, as by conference may appear. Much less can I believe it to be the *Hippodamus*, because the female wanteth horns, and the head is like a Mules; but yet it may be that it is a kinde of *Elk*, for the horns are not always alike, or rather the *Elk* is a kinde of Horfe-hart, which *Aristotle* calleth *Arctochofus* of *Arctas* a region of *Assia*; and herein I leave every man to his judgement; referring the Reader unto the former discourses of an *Elk*, and the *Tragelaphus*.

#### Of the SEA-HORSE.

The Sea-horfe, called in *Greek*, *Hippotomus*, and in *Latine*, *Equus Fluvialis*; It is a most ugly and filthy Beast, so called because in his voyce and mane he resembleth a Horfe, but in his head an Oxe or a Calf; in the residue of his body a Swine, for which cause some *Grecians* call him sometimes a Sea-horfe, and sometimes a Sea-oxe, which thing hath moved many learned men in some time to affirm, that a Sea-horfe was never seen; whereunto I would easily subscribe. (See *Sallustius*) were it not that the ancient figures of a Sea-horfe, altogether resembled that which is here expressed, and was lately to be seen at *Constantinople*, from whom this picture was taken.

It liveth for the most part in *Nile*; yet is it of a doubtful life, for it brings forth and breedeth on the land; and by the proportion of the legs, it seemeth rather to be made for going, then for swimming: for in the night time it eateth both hay and fruits, foraging into corn fields, and devouring whatsoever cometh in the way; and therefore I thought it fit to be inserted into this story. As for the Sea-calf, which cometh sometimes to land only to take sleep; I did not judge it to belong to this discourse, because it feedeth only in the waters.



This picture was taken out of the *Colossus* in the *Vatican* at *Rome*, representing the River *Nile*, and eating of a Crocodile: and thus I reserve the farther discourse of this beast unto the History of Fishes, adding only thus much, that it ought to be no wonder, to consider such monsters to come out of the Sea, which resemble Horfes in their heads, seeing therein are also creatures like unto Grapes and Swords.

The *Orlean Indians* do hunt a Beast with one horn, having the body of a Horfe, and the head of a Hart. The *Aethiopians* likewise have a Beast, in the neck like unto a Horfe, and the feet and legs like unto an Oxe. The *Rhinoceros* hath a neck like a Horfe, and also the other parts of his body, but it is said to breath out air which killeth men. *Pausanias* writeth, that in the Temple of *Gabalus*, there is the picture of a Horfe, which from his breast backwards is like a Whale. *Lampiscus* writeth, that in the *Syrian* Ocean, there are Islands wherein the people are called *Hippodotes*, having the bodies of men, but the feet of Horfes; and *Lamia* hereafter to be declared, hath the feet of a Horfe, but in other things the members of a Goat: and thus much for the several kinds of Horfes, both for them that are properly so called, and also for any other, which like bastards retain any resemblance of nature with this Noble and profitable kinde of Beast.

#### Of the Diet of Horfes, and their length of life.

HAVING thus discoursed of the kinds of Horfes, and their several accidents, and uses both for War, Hand Peace, pleasure, and necessity; now likewise it followeth, that we should proceed to their diet, and manner of feeding: wherein we are first of all to consider, that the natural constitution of a Horfe is hot and temperate. Hot, because of his Levity, and Velocity, and length of life; temperate, because he is docile, pleasant, and gentle towards his Master and Keeper. He therefore that will keep Horfes, must provide for them abundance of meat; for all other Cattel may be piached without any great danger, only Horfes can endure no penury. *Varro* saith, that in feeding of Horfes, we must consider three things: First of all, what food the Countrey wherein we live doth yield; Secondly, when it must be given; Thirdly, by whom, but specially the place of feeding Horfes is to be considered; for although Goats can live in the Mountains, better then in the green fields, yet Horfes live better in the green fields, then they can in the Mountains. For which cause when we chuse pasture for Horfes, we must see that it be fat, such as groweth in Meddows, that in the Winter time it may be Sunny, and in the Summer it may be open and cold, neither so soft under-foot, but that the Horfes hoofs may feel some hardnes, for Horfes, Mules, and Asses, do love well green grafs, and fruits, yet principally they grow fat with drinking; when they are in the stables, let them have dry Hay. A Mare when the hath foaled give her Barley, and generally at all times in the Winter season *Palladium*, or a mixture of all kinds of grain is fit for them in the houle, according to these verses of *Hesiodus*:

Inde ubi pubentes colamos duraverit aestas,  
Labaque uicinis herbis siccauerit omem  
Nepibus humorem, culmisque armarit aristas,  
Odaeum, paleaeque leues, praesere memento.  
Favere quoniam, putas scietere fruges

Cura sit, atque toros manibus percurrere equorum,  
Gaudere ut plausus sonipes letumque relaxet:  
Corpus, et alios rapit per viscera iucenti,  
Id curent famuli, comitumque animosa juvenum.

We have shewed already, that they must have Straw, or litter to ly upon, and *Pellus* doth set down the kindes of meats for Horses, as Barley, hay, or French wheat, rice, and hay; for hard and dry meat is fittest for Horses, because it doth not fill them with winde; but all green meat is the leas approved, by reason of inflammation. Three-leaved grafs is also good for Horses, especially if they be young, for chaffe, hay, grafs, and oats, are their natural and pleasing food: and although grafs be moist, yet in the young age of a Horse, he delights in moist meats, for they stretch out his belly, and encrease his growth, but when he is elder, then ought he to be nourished with dryer food; as chaffe, Barley, Oats, and such things. For although chaffe, by reason of their dryness, make not a Horse fat, yet do they preserve him in perfect strength, for all hard things which are dissolved with difficulty, do retain their force of nutriment longer, but softer meats do not so; therefore the best dyet or habitude for Horses, is, to retain the mean betwixt fatness and leanness. For fatness minnistrh many humors to the nourishment of sickness, and leanness diminisheth natural strength, maketh the body deformed. In some Countreys they give their Horses Vine branches in the Autumn, to move their bellies, and increase their strength.

*Mithridat.*  
*Diopscordus.*

The herb *Medica*, which aboundeth in *Medie*, is very nourishable to Horses, but the first stalks are refused, saith *Aristotle*, the residue being watered with stinking water, is most commodious. In *Italy* they fat their Horses with *Trifoly*; in *Calabria* with *Sulla*, or *Aribittica*; and the *Thracians*, near the River *Strymon*, with a green Thistle.

In the Spring time give your younger Horses *Bullimung* for many dayes together, for that will not only make them fat, but also purge their bellies: for this purgation is most necessary for Horses, which is called foaling, and ought to continue ten days together, without any other meat, giving them the eleventh day a little Barley, and so forward to the fourteenth; after which day, continue them in that dyet ten days longer, and then bring them forth to exercise a little, and when as they sweat, anoint them with Oyl; and if the weather be cold, keep a fire in the stable: And you must remember when the Horse beginneth to purge, that he be kept from Barley and drink, and give him green meat, or *Bullimung*, whereof that is best that groweth near the Sea side.

But if the Horse go to soil in *April*, after five days, bring him forth, and wash him all over with water, then wiping his hair from all wet and filth, and loose hairs, pour upon him Wine and Oyl, pressing it smooth upon his back, down to his skin; so let him be wiped all over again, and carryed into the stable, to be dieted with *Masline*, or *Bullimung*, as before, except he be troubled with the Glanders, and then he must not feed on it in the day time, lest through the heat of the Sun, he fall into the mangie, or into madness.

It is also requisite, that while we feed our Horses with green Corn, they be let blood in the veins of the breast, and also cut in the roof of their mouths, that so those places being emptied which were stuffed with corruption, the vacuity may be replenished with better blood; a Horse thus dyed, shall not only live in more health, and free from sickness, but also be more strong to undergo his labour.

With the blood that cometh out of him, mingled with Nitre, Vinegar, and Oyl, you shall anoint him all over, if so be he be subject to the Glanders, or to the Mangie; and then keep him in the stable five dayes together, suffering no Curri combe to come upon him, untill the sixth day, feeding him in the mean time with green Corn or *Bullimung*; and then bring him forth again, washing him all over with water, and rubbing him with a hard whisp, untill the humor or moillures be wholly wiped off, and he fed as before fourteen dayes together.

If you please not to keep him in the stable, then in the Spring time, turn him out in some meadow, or green pasture, and there let him feed at his own pleasure; for it hath been often proved, that such a dyet hath recovered may sick Horses.

It is reported of the *Horta*, and *Gedrisi*, and men of *Freeceland*, the *Macedonians*, and *Lydians*, do feed their Horses with fishes: Likewise the *Pennians* which inhabit about *Profusus* near the Mountain *Orbelus*, do feed their Horses, and all Cattel which they yoke with fishes.

Concerning the drink of Horses we have spoken elsewhere, and therefore we shall not need to say any thing of it here, except that the drinking much, and the Horse thrusting his head in deep into the troubled water, is an unfallible sign of his goodness; and the custom of some is, for to give their Horses mashes made of water and corn sod together, or else Bear, Ale or Wine, by drinking whereof, they encrease their spirits and stomach.

*Albertus* saith, that some to make their Horses fat, take Snails, and beat them in pieces, fo putting them into their meats, whereby they grow to a false fatnesse, which is easily dissolved. By eating of black Hellebor, Oxen, Horses and Swine are killed: and thus much for the food of Horses.

Concerning the voice of Horses, the *Latins* call it *Hinnitum*, and the *Grecians*, *Phurua*, and *Phrumetisa*; but this is certain, that from their very foaling, the females have a shrill and sharper voice than the males, which is fuller and broader, untill they be two year old, and after copulation their voice encrease, so continuing untill they be twenty year old, after which time, it falleth and decreaseth again.

The length of a Horses life (according to *Aristotle*) is eighteen or twenty years, and if they be well tended and regarded in their youth, it hath been found, that some have lived unto five and twenty, or thirty year old. The females live longer then the males, because of their generation, for

The time of  
their life.

for the immoderate lult of Horses, shorineth their dayes. And it hath been found that a Mate hath lived to forty or fifty years, and a Horse to three and thirty: wherefore I do leave the relation of *Pliny* and *Albertus*, to be censured by the Reader, who affirm, that Horses in their time, lived threecore or seventy years.

*Albertus* also affirmeth, that a Souldier told him for a certain truth, that he knew a Horse which lived till he was threecore years old, and at that age did service in the field. And *August. Niphus* also affirmeth, that the Riders of *Ferdinand* the first, told him there was a Horse in their Millers stable of seventy year old. The age of a Horse may be known by his teeth, and the *Persian*, *Bohemian*, *Epirian*, and *Sicilian* Horses, live longer then the *Spanish* or *Namidian*. In their years, the female never groweth after five, nor the male after six in height or length, so as the males are sooner perfected in the womb then the females, on the contrary the females do looner grow to their perfection after their foaling then the Males.

The males have more teeth then the females, and in each sex they which have fewest teeth, live not so long, and in their old age their teeth grow white. Now their age is discerned by their teeth on this manner, the first four, that is two above and two beneath, be changed after they be thirty year old, and a year after the four next are changed in like manner, again after another year four more are changed, so that after four year and six moneths, he looeth no teeth, except canine, which cometh again in the fifth and sixth year; so that afterwards their age cannot be discerned, because in the leaventh year, they are all filled. Another unfained note of their age, is the hollownes of their temples, and their eye-lids beginning to wax gray, and their teeth hanging out of their mouths. They have also little blains in the middle of their teeth. Some try the age of their Horses, as a wife and learned man writeth, by considering twelve teeth, six above, and six beneath, for the old Horses have longer and chinner teeth, which are black at the top, and there are certain broaches or wrinkles in their teeth, which being filled, the mark is said to be out of their mouth.

Some try the age of their Horses by their cheeks, for they pull up the skin from the bones, and if it will quickly fall back again into his former place, they take it for an assured token of the Horses youth: but if it stand out and fall slowly down, then on the contrary, they judge the Horse to be old, and thus much for the age and diet of Horses.

### Of the uses of Horse-flesh, Mares-milk, and other parts.

There are certain people in *Sybia*, which were called *Hippobag*, because they lived upon Horse-flesh; such also were the *Sarmatians* and the *Fandalis*: likewise in *Sybia* the lesse, neer *Taurica Cheromeum*, the people do not only eat the flesh of Horses, but also their milk, and make Cheese thereof.

*Athenas* also affirmeth, that the manner of the ancient *Persians* was, upon the feasts of their nativities to roast an Ox, an Ass, a Horse, and a Camel whole, and so let them before their guests.

In like sort, they eat Horse-flesh and Camels-flesh at *Damasus*; and in *Polonia* wilde Horses, especially that part which groweth under the mane. The *Sarmatians* made meat of Millet-seed, and mingle it with Mares milk, or with blood taken out of the veins of their legs, wherewithal they make puddings, and this is their chief food. So likewise do the *Tartarians*, who having a Horse sick, cut off his Ulcer or wound, and so kill him and eat his flesh. The *Goths* also in the dayes of *Vigil* did drink the blood of Horses, as appeareth in these Verses;

*Profusus incensus altus avertere, & intet*  
*Ima ferito pedu, solentem sanguine vergam:*  
*Bisalta, quo more solent, acerque Glosium*  
*Curi fugit in Rhodopem, atque in deserta Getarum,*  
*Et lac concretum cum sanguine potat equino.*

The Poets do also say; that *Pellus* the Son of *Tirum* and *Nepune*, was educated by a Mare, and *Matas* brought up his Daughter *Camilla* with Mares milk, because she was born wilde; he also bred her among the bushes, according to these Verses;

*Hic natam in duni, interque barrentia lustra*  
*Armentalis equa mammi, & lacte ferino*  
*Nutribat, teneris immulgens ubera labris.*

The *Tartarians* drinke Mares milke, which they dresse like white wine, and call it *Chyma*; wherof *Petrus Venerius* rehearseth this story: The King of *Tartar*, saith he, nourisheth above ten thousand milk-white Horses and Mares, and every year, upon the eight and twenty day of *August*, they observe a solent feast, wherein the milk of these white Mares, is dresse and let forth in comely vessels.

Afterward the King taketh a bowl full thereof, and powreth it on the ground round about him, being so taught by his *Magicians*, to offer Sacrifice to the gods of his Country: For they persuade him,

*Mat. Michu.*  
*Pan. Venerius.*

him that the Gods lick up that milk spilt on the ground, and afterwards the King drinketh up the residue, and besides him no body that day, except it be of the Kings lineage, or of the Country of *Hiorach* (for the people of that Country have liberty to tast thereof that day) because of a battle which once they obtained for the great *Cam*.

The property of this milk is to loosen the belly; and because it is thin and hath no fat in it, therefore it easily descendeth, and doth not curdle in the stomach, and it is said, that the *Seythians* can keep it twelve dayes together, therewithal satisfying their hunger, and quenching their thirst. And thus much shall suffice for the natural discourses of Horses: hereafter followeth the moral.

*The moral discourse of Horses, concerning Fictions, Pictures, and other devices.*

And first of all for the moral dignity of Horses, there is a celestial constellation called *Hippu*, according to these Verses of *Aratus* thus translated;

*Hic Equus ille jubam quatens fulgore micant  
Summum contingit capus alio stellasque jurgens  
Una.*

The *Latins* call this star *Pegasus*, and they say that he is the Son of *Neptune* and *Medusa*; who with striking his foot upon a Rock in *Hellon* a mountain of *Bætie*, opened a Fountain, which after his name was called *Hippocrene*. Others tell the tale in this sort, at what time *Bellerophon* came to *Pretu* the Son of *Abus* the King of the *Argives*, *Antia* the Kings wife fell in love with her guest, and making it known unto him, promised him half her husbands Kingdom if he would lie with her, but he like an honest man abhorring so foul a fact, utterly refused to accomplish the desire and dishonesty of the lustful Queen; whereupon she being afraid lest he should disclose it unto the King, prevented him by her own complaint, informing the King that he would have ravished her: when the King heard this accusation (because he loved *Bellerophon* well) would not give punishment himself, but sent him to *Sebenobus* the Father of Queen *Antia*, that he in defence of his Daughters chastity might take revenge upon him, who presently cast him to *Chimæra*, which at that time depopulated all the coast of *Lycia*: but *Bellerophon* by the help of the Horse *Pegasus* did both overcome and avoid the monster, and being weary of his life, perceiving that there was no good nor truth upon the earth, determined to forsake the world and flee to heaven: who coming neer to heaven, casting down his eyes to the earth, trembled to see how far he was distant from it, and so his heart fainting for fear, fell down backward and perished, but his Horse kept on his flight to heaven, and was there placed among the Stars by *Jupiter*. *Ætius* edes telleth the tale otherwise, for he saith that *Chiron* the *Centaure* had a Daughter nourished in the mountain *Pelion* which was called *Thras* and afterward *Hippe*, because of her exceeding hunting on horse-back, she was perished by *Æolus* (the Son of *Hellen*, a Nephew of *Jupiter*) to let him lie with her, whereupon she conceived with child, and when the time of her deliverance came, she fled from her Father into the woods, for fear the loss of her Virginity should be known unto him; but he followed her to see what was the cause of his Daughters departure, whereupon she desired of the Gods that her father might not see her in travel, her prayer was granted, and she after her delivery, was turned into a Mare, and placed among the Stars.

Others say that she was a Prophetesse, and because she revealed the counsels of the Gods, was therefore metamorphozed in that shape in the place aforesaid. Others say, that because she gave over to worship *Diana*, she lost her first presence. But to return to the first tale of *Bellerophon*, who after the death of *Chimæra*, growing proud for his valor attempted to flee to heaven, but *Jupiter* troubled his Horse with a Fury, and so he shooke off his Rider, who perished in the field, *Alecu* apo *lese* *alef*, because of his error: and *Pegasus* was placed in heaven.

But to come neerer to the description of the Poetical Horse, *Alberus Magnus* and some others say, that it is a Beast bred in *Ethiopia*, having the head and feet of a Horse, but horned; and wings much greater then the wings of an Eagle, which he doth not lift up into the air like a bird, but only stretcheth them out when he runneth, whereby his only presence is terrible to all creatures, unto whom he is enemy, but especially to Men. But for the truth hereof (although *Pliny* and some others seem to affirm as much) yet will I set down nothing for truth and certainty, because as the Poets call every swift Horse *Vulcanes*, and *Alipeds*; so the error of that figure, hath rather given occasion to the framing of this new Monster *Pegasus*, then any other reasonable Allegory.

Likewise I know no cause why the Poets should faine, that *Ceres* was turned into a Mare, and hid her self in the herds of *Oncine*; *Neptune* falling in love with her, followed her to those fields, and perceiving that he was deceived, turned himself also into a Horse, and so had to do with her, whereat *Ceres* was grievously offended, and fell into a great fury, for which cause she was called *Erimys*: yet afterwards she washed her self in the River *Ladon*, laying aside all her rage and fury, at the fountains of time she brought forth *Arion*.

And

And the *Aradians* also had a certain Den, wherein they had a great remembrance of this ravishment of *Ceres*, sitting in a Den, wherein they lay the hid her self from all creatures, and whereunto they offer divine worship. They picture her in a Colts skin, sitting like a woman in all parts, with a long garment down to her ancles, but the head of a Horse with the pictures of many Dragons, and other such wilde beasts, holding in one of her hands a Dolphin, and in the other a Dove.

By all which it is not unseemly for every man to know & conceive their meaning, that plenty of food signified by *Ceres*, doth not only maintain Men, Fowls, Beasts and Fishes, but also the immoderate use thereof draweth men to inordinate lust and concupiscence, and that the Gods of the Heathen were more rather to be accounted Beasts then Men.

*Diana* also among the *Aradians* was called *Eurippa*, for the finding out of those Mares which *Ulysses* had lost: which *Ulysses* erected a statue for *Neptune* the great Rider, and they say that *Hippolytus* being torn in pieces by Horses, through the love of *Diana*, and skill of *Æsculapius*, by the vertue of certain herbs he was restored unto life again: Whereupon *Jupiter* being fore vexed and angry with *Æsculapius* for such an invention, deluding as it were the fury of the Gods, killed him with lightning, and thrust him down into hell, because no wretched man would fear death if such devices might take place: which fact *Virgil* describeth in these Verses:

*At Trivia Hippolytum secretis alma roondit  
Sedibus, & nympha Ægeria nemoque relegat,  
Solum ubi in silvis Italia ignobilitæ ævum  
Exigret; versique ubi nomen Virgine esset.*

*Unde etiam Trivia templo lucisque sacras  
Corripedes acentur equi, quod listore cursum  
Et juvenem montis in pavidis effudite marinis.*

The Poets also do attribute unto the night, black Horses, and unto the day white. *Homer* saith, that the names of the day Horses are *Lampus* and *Pæanthos*; to the Moon they ascribe two Horses, one black and another white; the reason of these inventions for the day and the night is, to signify their speedy course or revolution by the swiftness of Horses, and of the darkeness of the night by the black Horses, and the light of the day by the white; and the Moon which for the most part is hid and covered with earth, both increasing and decreasing, they had the same reason to signify her shadowed part like a black Horse, and her bright part by a white one.

The like Fiction they had of *Hecate*, whom *Ausonius* calleth *Tergemina*, because she is described with the head of a Horse, a Dog, and a wide Man, the Horse on the right hand, the Dog on the left hand, and the wide Man in the middle: whereby they declared how vulgar, illiterate, and uncivilized men, do participate in their conditions, the labours and envie of brute beasts.

We may also read in the *Annales* of *Tacitus*, that in his time there was a Temple raised to Equestrial fortune, that is, for the honour of them which managed Horses to their own profit, and the good of their Country, and that *Fulvius* the *Pretor* in *Spain*, because he obtained the victory against the *Celiberians*, by the valour and diligence of his Horse-men, was the first that builded that Temple. Likewise, there was another Temple in *Bætie* for the same cause dedicated unto *Hercules*.

The ancient *Pagans* call the God of Horses *Hippus*, as the God of Oxen *Bubonus*. It is also apparent, that many Nations use to sacrifice Horses, for at *Salentinum* a Horse was cast alive into the fire and offered to *Jupiter*. Likewise the *Lacedemonians* sacrificed a Horse to the winds. At *Rome* also they sacrificed a Horse to *Mars*, and thereof came the term of *Equum October*, which was sacrificed every year in *October*, in *Campus Martius*. This Horse was often take out of a Chariot, which was a Conqueror in race, and stood on the right hand; as soon as he was killed, some one carried his tail to a place called *Regia*, and for his head there was a continual combat between the inhabitants of the streets, *Suburra*, and *Sacravia*, which of them should possess it; for the *Suburrans* would have fattered it to the wall of *Regia*, and the *Sacraevians* to the Tower *Mamilia*.

The reason why they Sacrificed a Horse, some have conjectured because the *Romans* were the offspring of the *Trojan*, and they being deceived by a Horse, their posterity made that Sacrifice for punishment of Horses: but it is more reasonable, that because they Sacrificed a conquering Horse, they did it only for the honour of *Mars* (the God of victory) or else because they would signify, that flying away in battle was to be punished by the example of Sacrificing of a swift Horse.

The *Cermani* did also worship *Mars*, and because they had no Horses to use in War, they were forced to use Asses, for which cause they Sacrificed an Ass unto him. There is another fable amongst the Poets, that the *Metimmaans* were commanded by the Oracle to cast a Virgin into the Sea to *Neptune*, which they performed: now there was a young man whose name was *Emallus*, which was in love with the said Virgin, and seeing her in the Waters, swum after her to save her, but both of them were covered with the waters of the Sea; yet after a certain space *Emallus* returned back again, and brought news that the Virgin lived among the Pharies of the Sea, and that he after that he had kept *Neptunes* Horses, by the help of a great wave escaped away by swimming; for the Poets faine that *Neptunes* Chariot was drawn by Horses of the Sea, according to these Verses of *Gillius*;

Now













## Of the Fever which cometh of raw Digestion, or of Repletion.

**Y**ou shall know if the Fever proceedeth of any such cause, by these signes here following. The Horse will blow at the nose more then he is accustomed to do, seemeth to fetch his winde only at his nose, and his breath will be short, hot and dry, you shall see his flanks walk, and his back to beat. The cure: Cause him to be let blood abundantly in the head and palat of his mouth, and by squirting warm Vinegar in the morning into his nostrils, force him to neele: and if he be collicive, let his fundament be raked, or else give him a Glyster to ease the pain in his head. And as touching his diet, give him but little provender or hay, neither let him drink much nor often, but betwixt times. But in any wise let him be well rubbed and chafed, and that a good while together, and if you use the Friction in the last Chapter before in such sort as there is said, it shall do him very much good.

## Of the Fever accidental coming of some Vicer in the mouth or throat.

**T**he Horse not being well kept and governed, after that he hath been let blood in the upper parts; yea, and also besides that of his own nature is subject unto the distillation in his throat, or parts thereof, the painful swelling or Ulcer whereof, causeth the Horse to fall into a grievous Ague. Whereof, besides the former remedies apt to purge humors, it shall be necessary also, to let him blood in the vein of the head, and in the palat of his mouth, and to be short; in all those places where the disease causeth most grief. And if the Horse be so sore pained as he cannot swallow down his meat, it shall be good to give him lukewarm water mingled with Barley meal, or Wheat meal, and beside that, to make him swallow down seven sops papped in Wine one after another, at one time: some use at the second time to dip such sops in sweet Sallet Oil. Thus far Vegetius.

## Of the Pestilent Ague.

Blundeville.

**I**t seemeth by *Laurentius Rusticus*, that Horses be also subject to a Pestilent Fever, which almost incurable, is called of him *Infirmas Epidemias*, that is to say, a Contagious and petisiferous disease, whereof there dyed in one year in *Rome* above a thousand Horses, which as I take it came by some corruption of the air, whereunto *Rome* in the chief of Summer is much subject, or else corrupt humours in the body ingendered by unkind food, by reason perhaps, that the City was then pestered with more Horse-men then there could be conveniently harbored or fed. *Laurentius* himself toucheth no cause thereof, but only beweeth signes how to know it, which be these: The Horse holdeth down his head, eateth little or nothing, his eyes waterish, and his flanks do continually beat. The Cure: First give him this Glyster. Take of the pulp of *Colocynthis* one ounce, of *Dragantum* one ounce and a half, of *Centauri* and *Wormwood*, of each one handful, of *Calendula* half an ounce, boil them in Water, then being strained, dissolve therein of *Serapollonum* six ounces, of Salt an ounce and a half, and half a pound of Oil-olive, and mixke it lukewarm with a horn, or pipe made of purpose. Make also this Plaster for his head; Take of *Squilla* five ounces, of *Elder*, of *Cassia*, of Mustard seed and of *Exorism*, of each two ounces, dissolve the same in the juice of *Dafodil*, and of Sage, and lay it to the Temples of his head next unto his eares; or else give him any of these three drinks following. Take of the belly Triacle two ounces, and dissemper it in good Wine, and give it him with a horn; or else let him drink every morning the space of three dayes, one pound or two of the juice of *Elder* roots; or else give him every morning to eat, a good quantity of *Venus* hair, called of the Latins, *Capillus Veneris*, newly and fresh gathered, but if it be old, then boil it in Water, and give him the decoction thereof to drink with a horn.

## Martins opinion and experience touching a Horses Fever.

Blundeville.

**T**hough *Martin* have not seen so many several kinds of Fevers, as chances to Horses, yet he confesseth that a Horse will have a Fever, and saith, that you shall know it by the signification. For after the Horse hath been sick two or three dayes, if you look upon his tongue you shall see it almost raw and scald, with the heat that comes out of his body, and he will shake and tremble, and stagger when his fit cometh, which fit will keep his due hours, both of continuance and of continuance, unless you prevent it by putting the Horse into a bath, which would he do to you as you see him begin to tremble, either by riding him, or tying up his legs, and by chafing him up and down in the flanks, until he leave shaking, and then let him be kept warm, and chafed, and let him bite the space of two hours, that done, you may give him some hay, by a little arched and give him warm water, with a little ground malt twice a day, the space of three or four dayes, and once draw his tongue with Alomwater, Vinegar & Sage, but if you see that all this prevails not then purge him with this drink, after that he hath fasted all one night; Take of Aloes one ounce, of *Agnus* half an ounce, of *Licorae* and *Annis* seeds, of each a dram beaten to powder, and let him drink it with

with a quart of white wine likewarm, and made sweet with a little hony in the morning fasting, and let him be chafed a little after it, and be kept warm, and suffered to stand on the bit meateleite two or three hours after, and he shall recover his health again quickly.

## Of sickness in general, and the Fever.

**I**n general, sickness is an opposite foe to nature, warring against the agents of the body and mind. Markham. In seeking to confound those actions which uphold and maintain the bodies strength and liveliness. Who covereth to have larger definition of sickness, let him read *Vegetius*, *Rufus*, or excellent Master *Blundeville*, who in that hath been admirably well-deserving painful. For mine own part, my intent is to write nothing more then mine own experience, and what I have approved in Horses diseases most available: and first of the Fever or Ague in a Horse, though it be a disease seldom or not at all noted by our Mechanical Horse Barriers, who cure many times what they know nor, and kill where they might cure, knew they the cause: yet I have my self seen of late (both by the demonstration of others better learned, and by the effects of the disease) some two Horses which I dare avouch were mightily tormented with a Fever; though divers Leeches had thereof given divers opinions, one saying it was the Bots, by reason of his immoderate languishment: another affirmed him to be bewitched, by reason of great shaking, heaviness, and lousing: but I have found it and approved it to be a Fever, both in effect, nature, and quality; the cure whereof is thus; for the original cause of a Fever, is first, breeding putrefaction in the blood; then when his shaking beginneth, take three new laid Eggs, break them in a dish, and beat them together, then mix thereto five or six spoonfuls of excellent good *Aquaviva*, and give it him in a horn, then bridle him, and in some Close or Court, chafe him till his shaking cease, and he begin to sweat: then let him up and cloath him warm. And during the time of his sickness, give him no water to drink, but before he drink it; both therein *Mallows*, *Sorrel*, *Purshin*, of each two or three handfulls.

As for his food, let it be sodden Barly, and now and then a little Ric in the sheaf to cleanse and purge him, chiefly if he be dry inwardly and grow collicive. This I have proved uneffectless for this disease, and also much available for any other inward sickness proceeding either of raw digestion, too extreme riding, or other surfeit. Divers have written diversly of divers Agues, and I could prescribe receipts for them, but since I have not been experimented in them all, I mean to omit this, intending not to exceed mine own knowledge in any thing.

## Of the Pestilence.

**T**he Pestilence is a contagious disease, proceeding, as *Pellegrinus* saith, sometime of overmuch labour, heat, cold, hunger, and sometime of sudden running after long rest, or of the retention or holding of hale or urine, or of drinking cold water whilst the Horse is hot and sweating; for all these things do breed corrupt humors in the Horses body, whereof the Pestilence chiefly proceed, or else of the corruption of the air, poisoning the breath whereby the Horse should live, which also happeneth sometime of the corruption of evil vapors, and exhalations that spring out of the earth, and after great floods or earthquakes, and sometime by means of some evil distillation or influence of the Planets, corrupting sometime the plants and fruits of the earth, and sometime divers kind of Cattle, and sometime both Men, Women and Children, as we say by experience. It seemeth that this evil or mischief in times past came suddenly, without giving any warning, for some of mine Authors doth declare any signes how to know whether a Horse hath this disease or not, but only affirm, that if one Horse do die of it, all his fellows that bear him company will follow after, if they be not remedied in time: so that as far as I can learn, the sudden death of one or two first, must be the only mean to know that this disease doth reign. And the remedy that they give is this: First separate the whole from the part, yea, and have two horse out of the air of those that be dead, the bodies whereof as *Vegetius* saith, lay upon a dry place, and bury them all the rest. And let them blood as well in the neck as in the nostrils, and then give them this drink. Take of *Gentian*, of *Aristolochia*, of Bay berries, of *Myrrour*, of the scraping of Ivory, of each like quantity, beat them into fine powder, and give a pint to the sick as to the whole, whom you would preserve from this contagion every day a spoonfull of two of this powder in a pint of good Wine, so long as you shall see it stand. This medicine before rehearsed, is called of the ancient writers *Dysenteria*, that is to say, a composition of diverse simples, and is praised to be a soveraign medicine and preservative against all inward diseases, and therefore they would have such as travel by the way, to carry of this powder always about them.

There be many other medicines which I leave to write, because if I should rehearse every one, my book would be infinite: I for my part would use no other then that before expressed, or else Wine and Treacle only.

*Of the Diseases in the Head.*

**Blundevile.**

**T**He head is subject to divers diseases according to the divers parts thereof: for in the pannels or little fine skins cleaving to the bones, and covering the brain, do most properly breed Head-ach and Migram. Again, in the substance of the brain, (which in a Horse is as much in quantity as almost the brain of a man Hog) do breed the Frensie, madnes, sleeping evil, the Palfie and forgetfulness. Finally in the ventricles or cels of the brain, and in those conduits through which the spirits animal do give feeling and moving to the body, do breed the Turnick or staggers, the Falling-evil, the Night-mare, the Apoplexy, the Palfie, and the Convulsion or Cramp, the Catar or Rume, which in a Horse is called the Glanders: but first of Head-ach.

*of Head-ach.*

[illegible]

*Of the Frenzy and Madness of a Horse.*

**T**He learned Physicians do make divers kinds, as well of Frensie, as of Madnes, which are not needful to be recited, sith I could never read in any Author, nor learn of any Farriar, that a Horse were subject to the one half of them. *Abyrtus, Eliecloste, Exumelis, Pelagionius, Hippocrate*, do write simply of *furor & rabie*: that is to say, of the madnes of a Horse. But indeed, *Vegetius* in his second Book of Horle-leach-craft, seemeth to make four mad passions belonging to a Horle, intitling his Chapters in this sort, of *Applus, de Frenetico, da Cardiacis, de Rabioso*, the effects thereof, though I fear me it will be to no great purpose, yet to content such as perhaps have read the Author as well as I my self. I will here briefly rehearse the same.

as well as I my self, I will here briefly rehearse the lame.

—When some naughty bloud (saith he) doth strike the film or pannicle of the brain, in one pure distill, and maketh the same grievously to ache, then the beast becometh *Applius*; that is to say, as it seemeth by his own words next following, both dull of minde and of sight. This word *Applius* is a strange word, and not to be found again in any other Author, and because in this passion, the one side of the head is only grieved, the Horse turneth round, as though he went in a Mill. But when the poyson of such corrupt bloud doth infect the mid brain, then the Horse becometh Frantick, and will leap and fling, and will run against the wals. And if such bloud fillethe the veins of the stomach, or break, then it infecteth as well the heart as the brain, and causeth alienation of minde, and the body to sweat, and this disease is called of *Vegelius, Pseudocardia*, which if *Equus Applius* chance to have; then he becometh *Rabidus*, that is to say, stark-mad. For saith he, by overmuch heat of the liver and bloud, the veins, and arteries of the heart are choaked up, for grief and pain whereof the Horse bitech himself, and gnaweth his own flesh.

Of two sorts of mad Horfes, I believe I have seen my self here in this Realm. For I saw once a black *Sweatband Horfe* (as I took him to be) in my Lord of *Hunsdon* stable at *Hunsdon*, coming thither by chance with my Lord *Moley*, which Horfe would flap all day long biting off the mane, and the little meat or none, suffering no man to approach unto him, by which his doinge and partly by his colour and complexion, I judged him to be vexed with a melancholy madness called of the Physicians *Mania*, or rather *Melancholia*, which cometh of a corrupt Melancholy, and flithy blood or humor, sometime spread throughout all the veins of the body, and sometimes perhaps remaining only in the head, or else in the spleen, or places next adjoining. The other mad Horfe was *Ron* only of *Master Ashtons*, Master of the Jewel house, which with his teeth crushed his Masters right forefinger in pieces, whilst he offered him a little Hay to eat, whereby he lost in a manner the use of his whole hand, to the great grief of all his friends, and also of all the Muses, which were wont to be much delighted with such passing sweet musick as that his fine quavering hand could sometime make upon divers Instruments, but especially upon the Virginals.

- This Horle I say, though he could eat his meat, & drink his drink, & sleep: yet if he were never so little offended, he would take on like a spirit, and both bite and strike at any man that came near him: yea and would bite himself by the shoulders most terribly, pulling away lumps of flesh, & brood as a mans hand: and whensoever he was ridden, he was faine to be muffled with a double robe, made of purpose to keep him from biting either of his Rider or of himself, which no muffle proceeded of some kind of frenzy or madness, whereunto the Horle was subject; by means that hot

blood (as I take it) abounded over-much in him. But now as touching the causes, signes, and cure of Horfes madnes, you shall hear the opinion of old Writers: for *Martin* never took such cure in hand. *Aspiriu* and the other Authors before mentioned, say, that the madnes of a Horse cometh either by means of some extream heat taken by travelling, or long standing in the hot Sun, or else by eating over many fitches, or by some hot blood resorting to the panicles of the brain; or through abundance of choler remaining in the veins; or else by drinking of some very unwholesome water. The signe he thefe, he will bite the manger and his own body, and run upon every man that comes nigh him, he will continually shake his ears, and stare with his eyes, and foam at the mouth: and according to *Hippocrates* faith, he will forsake his meat, and pine himself with hunger.

The cure. Cause him to be let blood in his legs abundantly, which is done (as I take it) to draw the blood from his head. Notwithstanding it were not amiss, to let him blood in the neck and breast veins. Then give him this drink: take the roots of wilde Cowcumber, and boile it in hard red Wine, and put thereunto a litle Nitre, and give it him with a horn luke-warm: or if you can get so Cowcumber, then take Rue and Mints, and boile them in the Wine; it were not amiss also to add thereto a handfull of Black *Ellipticum*, for that is a very good herb against madnes. *Eumelin* saith, that if you give him mans dung in Wine, to drink three mornings together, it will heal him: also to take of black *Ellipticum* two or three handfulls, and boile it in a sufficient quantity of strong Vinegar, and therewith rub and chafe both his head, and all his body once or twice a day; for the softer his head is rubbed, the better, and *exercit* is very profitable to all his body. Some again would have the skin of his body to be pierced in divers places with an hot iron, to let out the evil humors: but if none of all this will prevail, then the last remedy is to geld him of both his bones, or else of one of the least; for either that will heal him, or else nothing. As touching the diet and usage of a mad Horse, the Authors do not agree; for some would have him kept in a close, dark and quiet house, void from all noise, which *as Abrum* saith, will either make him madder, or else kill him out of hand. His diet would be chine, that is so fay, without any provender, and that day that he is let blood, and receiveth his drink, they would have him fast untill even, and then to have a warm mash of Barley meal: yea, me thinks it were not amiss to feed him only with warm mashes and hay; and that by a litle at once, untill he be somewhat recovered.

### Another of the Head-ach.

**T**he Head-ach, as most are opinionated, proceedeth of cold and raw digestion: the cure is; Take Markham.  
a Goose feather anointed with Oyl-de-bay, and thrust it up into the Horses nostrils, to make him need; then take a wreath of Pease-flaw or wet hay, and putting fire thereunto, hold it vnder the Horses nose, so as the smoke may ascend up into his head; then being thus perfumed, take a knife and prick him in the palat of the mouth, so that he may lick up and chaw his own blood, which done, haue great care in keeping his head warm, and doubt not his recovery.

*Of the Sleeping-vill.*

**T**his is a disease forcing the Beast continually to sleep, whether he will or not, taking his memory and appetite clean away, and therefore is called of the Physicians *Letargus*, it proceedeth of abundance of flegm moistning the brain overmuch. It is easie to know it, by the continual sleeping of the Horse. The cure of this disease according to *Pelagius*, *Vegetius*, and others, is in this sort: Let him blood in the neck, and then give him this drink: Take of Camomile and Mother-wort, of each two or three handfulls, and boil them in a sufficient quantity of water, and put thereunto a little Wheat-bran, Salt and Vinegar, and let him drink a pinte of that every day, the space of three or four days together. It is good also to perfume and chafe his head, with Thyme and Pennyroyal loden together in Vinegar, or with Brimstone and feathers burned upon a chafingdish of coals, under his nose: and to provoke him to sneeze, by blowing Pepper and Pyrethre beaten to powder, up into his nostrils: yea and to anoint the palate of his mouth, with Honey and Myllard mingled together, and in his drink, which would be always warm water, to put Parsley seed, and Fennel seed, to provoke urine. His legs also would be bathed, and his hoofs filled with Wheat-bran, Salt, and Vinegar, loden together, and laid to so hot as he may endure it, and in any case suffer him not to sleep, but keep him waking and stirring, by continual crying unto him, or pricking him with some sharp thing that cannot pass through the skin, or else by beating him with a whip, and this doing he shall recover.

*Another of the Sleeping-evill.*

**T**he Sleeping-evil in a Horle, differeth nothing from that which the Physicians call the Lethargy in men, for it provoketh the Horle to sleep continually, without desisting, robbing his memory and appetite of their qualities: the knowledge thereof is easily known by his drowiness, and the cure in this sort: Let one stand by him, and either with fearful noise or stripes, perforce keep him waking; then let him bloud under the eyes, and in the neck, and then take a leaf or two of the best Tobacco, which being dried and beaten to powder, with a quill blow it up into his nostrils, and give him to drink Vinegar, Salt, and Mustard mingled well together, to which if you put a little Honey,

Honey, it shall not be amiss; and also when he drinketh any water, put thereto either Fennel-seeds, Aniseeds or Pepper.

*Of a Horse that is taken.*

Blundeville.

A Horse is said to be taken, when he is deprived of his feeling and moving, so as he is able to stir no manner of way, but remaineth in such state and form, as he was taken in; which disease is called of the Physicians by the Greek name *Catalepsia*, and in Latine, *Dreprehensio*, or *Completio*; and of *Vegetius*, *Sideratio*; which also calleth those Beasts that have this disease *Jumenta siderata*. The Physicians say, that it cometh of abundance of phlegm and choler mixt together, or else of melancholy blood, which is a cold dry humor oppressing the hinder parts of the brain. But *Vegetius* saith, that it comes of some extreame outward cold, striking suddenly into the empty veins, or some extreame heat or raw digestion; or else of some great hunger, caused by long fasting. It is easie to know by the description before mentioned.

As touching the cure, *Vegetius* saith, that if it come of cold, then it is good to give him to drink one ounce of *Leisepitium*, with Wine and Oyl mixt together, and made luke-warm: if of heat, then to give it him with Water and Honey: if of crudity, then to heal him by fasting: if of hunger, then by feeding him well with Pease: But *Martin* saith, that this disease is called of the French men *Surpris*, and it cometh (as he saith) most chiefly of cold taken after heat, and he witheth a Horse that is thus taken, to be cured in this sort. First to be let blood on both sides of the breast, and then to be put in a heat either by continual stirring and molesting him; or else if he will stir by no means, then to bury him all save the head in a warm dunghill, and there to let him lie until his limbs have some feeling. And before you so bury him, it shall be good to give him this drink: Take limbs three pintes, and put thereunto a quartern of Sugar, and some Cinamon and Cloves, and let him drink it good and warm, and until he be perfectly whole, let him be kept warm, and often exercised and walked up and down in the stable, and thinly dieted, and drink nothing but warm water, wherein if you put some Fennel and Parsley seed, to provoke him to urine, it shall be the better. And if he cannot dung, let him be raked, and have a Glyster made of the broth of Mal-lows and fresh Butterm.

*Another of a Horse that is taken.*

Markham.

A Horse which is bereft of his feeling, moving or stirring, is said to be taken, and in sooth to he is, in that he is arrested by so villainous a disease; yet some Farriers, not well understanding the ground of the disease, confer the word taken, to be stricken by some Planet, or evil spirit, which is false; for it proceedeth of too great abundance of phlegm and choler, symbolized together: the cure is thus: Let him blood in his spur veins, and his breast veins, and then by foulding him in abundance of cloaths, drive him into an extreame sweat, during which time of his sweating, let one chafe his legs with Oyl-de-bay; then after he hath sweat the space of two hours, abate his clothes moderately; and thoroughly after he is dry, anoint him all over with Oyl *Petroleum*, and in twice or thrice dressing him he will be found.

*Of the Staggers.*

Blundeville.

This is a dizziness of the head, called in Latine, *Vertigo*, and of the Italians, as I remember, *Cephalura*. It cometh of some corrupt blood, or gross and tough humors oppressing the brain, from whence proceedeth a vaporous spirit, dissolved by a weak heat, which troubleth all the head. The signes be these; dimness of sight, the reeling and staggering of the Horse, who for very pain will thrust his head against the walls, and forsake his meat. The cure according to *Martin* is thus:

Let him blood in the temple veins, and then with a knife make an hole an inch long over his forehead, hard underneath his fore-top, and raise the skin with a Corner, thrusting it upward towards the head-tale a good handfull, and then put in a tent dipt in Turpentine and Hogs greas molten together, renewing the tent every day once until it be whole, and do the like upon the ridge of the rump; but me thinks it were better to do the like, in the powl of his head, or nape of his neck, for so should the evil humors have both ways the easier and speedier passage: and as touching his diet, let him have continually warm drink, and mashes; and once a day be walked up and down fair and softly to exercise his body.

*Of the Staggers.*

Markham.

The Staggers is a dzy disease, breeding frenzy in a Horse, which if it be not instantly helped, is mortal: the cure is thus; Let him blood in the temple veins; and then apply to his temples cloth wet in the juce of Garlike, and *Aqua vite* mixt together: if you crush Garlike, and put it in his ears, it is excellent; or if you lit his fore-head, and loosening the skin from the bone, taint with Turpentine and Saller-oil, it will undoubtedly help him.

*Of the Falling-evill.*

This is a kinde of Convulsion or Cramp, called of the Latines by the Greek name *Epilepsia*; in Italian, *Il morbo caduco*, depriving the Beast at certain times, and for a certain space of the life of feeling, hearing, and feeling, and of all the other senses. And although it be a disease hath been seldom seen to chance unto Horses of this Country, yet it appeareth by *Abyrinus*, and also by *Vegetius*, and divers others, that Horses be subject thereto. For *Abyrinus* writing to his friend *Tiberius Claudius* saith, that unto Horses chanceth many times the Falling-fickness. The signes whereof are these: The Horse will fall down suddenly, partly through the resolution of his members, and partly through distension of his sinews, and all his body will quiver and quake, and continue he will come at the mouth. *Vegetius* again writeth in this sort: By a certain course of the Moon Horses and other beasts many times do fall, and dy for a time as well as men. The signes whereof are these: Being fallen, their bodies will quiver and quake, and their mouths will some, and when a man would think that they would dy out of hand, they rise suddenly up and fall to their meat. And by feeling the gristle of their nostrils with your finger, you shall know whether they will fall often or not; for the more cold the gristle be, the oftner, and the less cold it be, the seldomer they will fall. The cure:

Let him blood abundantly in the neck veins, and within five days after, let him blood again at the temple veins, and let him stand in a warm and dark stable, and anoint all his body with comfortable Ointments, and his head and ears with Oyl of Bay, and liquid Pitch or Tar, mingled together. And also put some thereof into his ears, and then make a Bigger for him of some soft warm skin, as of a Sheeps skin, or else of Canvas knitted underneath with Wool, and make him this purging drink. Take of Radish roots two ounces, of the root of the herb called in Latine, *Panax* or *Panacea*, of each one ounce, beat all these things together, and boyl them in a quart of Honey, and at sundry times as you shall see it needful, give him a good spoonfull or two of this in a quart of Ale luke-warm, whereunto would be put three or four spoonfulls of Oyl. It is good also to blow the powder of Motherwort, or of Pyrethrum, up into his nostrils; and if the disease do continue still for all this, then it shall be needful to pierce the skin of his fore-head in divers places with a hot iron, and to let out the humors oppressing his brain.

*Of the Night-mare.*

This is a disease oppressing either Man or Beast in the night season when he sleepeth, so as he cannot draw his breath, and is called of the Latines, *Incubus*. It cometh of a continual crudity or raw digestion of the stomach, from whence gross vapours ascending up into the head, do oppress the brain, and all the sensitive powers, so as they cannot do their office, in giving perfect feeling and moving to the body. And if this disease chancing often to a man, be not cured in time, it may perhaps grow to a worse mischief, as to the Falling-evill, Madness, or Apoplexy. But I could never learn that Horses were subject to this disease, neither by relation, nor yet by reading, but only in an old English Writer, who sheweth together cause and signes, how to know when a Horse hath it, but only teacheth how to cure it with a foold foolish charm; which because it may perhaps make you gentle Reader to laugh, as well as it did me, for recreation sake I will there rehearse it. Take a flint stone that hath a hole of his own kinde, and bang it over him, and write in a bill,

*Ile nomen patris, &c.  
Saint George our Ladies Knight,  
He walked day, he did it night,  
Until he be found,  
Ele her best, and she her bound,*

*I will arily bertraeth the him-pilgh,  
That she would not come with to the night;  
There as Saint George our Ladies Knight,  
Named was three times, Saint George.*

And hang this Scripture over him, and let him alone: with such proper charms as this is, the old Fryars in times past were wont to charm the moneyous of plain folks puer.

*Of the Apoplexy.*

The Apoplexy, is a disease depriving all the whole body of sense and moving. And if it deprive but part of the body, then it is called of the Latines by the Greek name *apoplexia*, in our tongue a Palfie. It proceeds of cold, gross, and tough humors, oppressing the brain all at once, which may breed partly of crudities and raw digestion, and partly by means of some humor in the head, taken by a fall, strike, or otherwise. As touching Apoplexy, few or none making of Horses (which be) may make any mention thereof: but of the Palfie, *Vegetius* writeth in this manner: A Horse (which be) may have the Palfie as well as a man, which is known by these signes: He will go geckelling and sleeping like a Crab, carrying his neck awry; as if it were broken, and goeth crookedly with his legs, beating his head against the walls, and yet forsaketh not his meat, nor drink, and his provender (seemeth moist and wet. The cure. Let him blood in the temple vein, on the contrary side of the wrying of his neck, and anoint his neck with comfortable Ointment and splent in with plenty of wood to grate



it stand right, and let him stand in a warm stable, and give him such drinks as are recited in the next chapter following. But if all this profiteth not, then draw his neck with a hot iron on the contrary side: that is to say, on the whole side, from the neather part of the ear down to the shoulders, and draw also a good long strike on his temple, on that side, and on the other temple make him a little scar in this sort, and from his reins to his mid back, draw little lines, in manner of a ragged staff, and that will heal him.

### Of the Cramp or Convulsion of the Sinews and Muscles.

A Convulsion or Cramp, is a forcible and painful contraction or drawing together of the sinews and muscles, which do happen sometime through the whole body, and sometime but in one part or member only. And according as the body may be diversly drawn, so do the Physicians, and also mine Authors that write of Horse-leech-craft, give it divers names. For if the body be drawn forward, then they call it in Greek, *Emprosbismus*; in Latine, *Tenfo ad anteriora*. And if the body be drawn back, it is called in Greek, *Opiobismus*; in Latine, *Tenfo ad posteriora*.

But if the body be stark and frait, bowing neither forward, nor backward, then it is called simply in Greek, *Tetanus*; in Latine, *Difensio* or *Rigor*: which names also are applyed to the like Convulsions of the neck. Notwithstanding, *Vegetius* writing of this disease, entitleth his chapters *de Roborosis*, a strange term, and not to be found again in any other Author: A Convulsion, as I said before, may chance as well to one part or member of the body, as to the whole body: as to the eye, to the skin of the fore head, to the roots of the tongue, to the jaws, to the lips, to the arm, hand or leg: that is to say, whenever the sinew or muscle serving to the moving of that part, is evil affected or grieved: Of which Convulsions, though there be many divers causes: yet *Hippocrates* bringeth them all into two: that is to say, into fullness and emptiness: for when a Convulsion proceedeth either of some inflammation of superfluous eating or drinking, or for lack of due purgation, or of overmuch rest and lack of exercise, all such causes are to be referred to repletion or fullness. But if a Convulsion come by means of overmuch purging or bleeding, or much watching, extreme labour, long fasting; or by wounding or pricking of the sinews, then all such causes are to be referred unto emptiness. And if the Convulsion proceed of fullness, it chanceth suddenly, and all at once; but if of emptiness, then it cometh by little and little, and leisurely.

Besides these kinds of Convulsions, there is also chancing many times in a mans fingers, legs and toes, another kind of Convulsion, which may be called a windy Convulsion, for that it proceeds of some groth or tough vapour, entered into the branches of the sinews, which maketh them to swell like a Luce lying in moist weather, which though it be very painful for the time; yet it may be soon driven away by chafing or rubbing the member grieved with a warm cloth. And this kind of Convulsion or Cramp chanceth also many times to a Horses hinder legs standing in the stable.

For I have seen some of my self, that have had one of their hinder legs drawn up with the Cramp almost to the belly so stiff and hard, as no man hath been able to stir it; neither could the Horse himself set it down to the ground of a long season, which I think might be soon remedied: first by continual chafing, fretting, or rubbing his legs with a good wise, and then by tying up the other hinder leg, or else the foreleg on the fore side, whereby he should be forced to set down the painful leg. Thus far I have discoursed of the Convulsion of sinews; and of the causes thereof, according to the opinions of the learned Physicians. Now I will briefly shew you the causes, signes, and cure thereof, according to the doctrine of mine Authors that write of Horse-leech-craft.

*Abrissus* saith, that this disease doth come, either by driving the Horse into a sweat when he blitheth, or for that he hath trodden upon some nail, or by taking cold after journeying and sweating in Winter season, whereby his lips are clung together, or by long lying and rest after sweating, whereby the sinews of his fore-legs be nummed, or by having some stripe of his privy members; or by long travelling in the cold Mountains, where Snow and Ice doth abound. For *Theophrastus* writeth, that coming out of *Pemba*, with the King and his Army, and passing over the Mountains to go into *Moly*, there fell such abundance of Snow, as not only many Souldiers dyed, *driving him on their Horses backs*, with their Weapons in their hands; being so stark and stiff, and cleaving so fast to their Saddles, as they could not easily be pulled out of them: but also divers Horses in their going were so nummed as they could not bow their legs: yea and some were found stark dead, standing still on their feet, and few Horses or none escaped at that time free from this Convulsion of sinews, inasmuch that *Theophrastus* his own Horse which he loved dearly, was fore vexed thereby. The signes to know whether a Horse be troubled with the Convulsion in the sinews or not, be these:

His head and neck will be so stiff and stark, as he can bow it no manner of way; his ears will stand right up, and his eyes will be hollow in his head, and the fleshy parts thereof in the great corners will be turned backward; his lips will be clung fast together, so as he cannot open his mouth; and his tongue so nummed as he can neither eat nor drink; his back-bone and tail will be so stiff, as he cannot move it one way nor other; and his legs so stiff, as they will not bow, and being laid he is not able to rise, and specially on his hinder legs, but falleth down on his buttocks, like a Dog when he sitteth on the ground; and by means of the Convulsion in his back, his bladder also for neighbourhood sake, suffereth, whereby the Horse cannot stale, but with great pain. The cure.

Put him into a sweat, either by burying him all save the head in some warm dunghill; or it he be a Horse of price, carry him into a hot house, where is no smoke, and let him sweat there. Then anoint all his body, head, neck, legs, and all, with Oyl of Cyprus, and Oyl of Bay mingled together. Or else with one of these Ointments: Take of Hogs grease two pound, of Turpentine half a pound, of Pepper beaten in powder one dram, of new Wax one pound, of old Oyl two pound; boil all these together, and being made very warm, anoint all his body therewith. Or else with this Ointment: Take of new Wax one pound, of Turpentine four ounces, of Oyl of de-bay as much, of Opopanax two ounces, of Deers sweat and Oyl of Storax, of each three ounces, melt all these together, and anoint all his body therewith.

It is good also to bath his head with the decoction of Fitches, or else of Lupines; and make him this drink: Take twenty grains of long Pepper, finely beaten into powder, of Cedar two ounces, of Nuttre one ounce, of *Laserpittum* as much as a Bean, and mingle all these together with a sufficient quantity of white Wine; and give him thereof to drink a quart every morning and evening, for the space of three or four days; or else this drink: Take of Opopanax two ounces, of Storax three ounces; of Gentian three ounces, of Manna Succary three ounces, of Myrrhe one scruple, of long Pepper two scruples, give him this with old Wine: or make him a drink of *Laserpittum*, Cumin, Anise seed, Fenigreek, Bay-berries, and old Oyl.

In old time they were wont to let him bloud in the Temples, which *Abrissus* doth not allow, saying, that it will cause the sinews of his lips to dry up, so as the Horse being not able to move them, shall pine for hunger. As touching his diet, give him at the first warm mashies, and such soft meat as he may easily get down, and wet Hay, bringing him to harder food by little and little. And in any case, let him be kept very warm, and ridden or walked once a day to exercise his legs and limbs. *Theophrastus* cured his Horse, as he saith, by placing him in a warm stable, and by making a clear fire without any smoke round about him; and the Horse not being able to open his jaws of himself, he caused his mouth to be opened, and put therein sops dipt in a confection called *Emrigen condum*, and also anointed all his body with a Medicine or Ointment called *Acopum* (the making whereof hereafter followeth) dissolved in Cyprus Oyl, which made him to fall into a sweat, and being before half dead and more, brought him again to his feeling and moving, so as he did rise and eat his meat.

### Of the Cramp or Convulsions of the Sinews or Muscles.

A Convulsion or Cramp, is a forcible drawing together of the sinews, sometimes universally over the whole body; as I have seen one Horse in my life time, and sometimes but in one part or member, as I have known and helpt divers. These Convulsions have two grounds, namely, either natural, or else accidental; natural, as proceeding of cold windy humors ingendered in the body, and dispersed into those parts, work there the effects of grievance. Accidental, is by wounding or pricking the sinews, of which immediately ensueth a Convulsion. If it be natural, and the disease generally dispersed; then the cure is thus: Dig a great deep hole in some old dunghill, and there bury him all save the head, so as he may sweat there for the space of two hours at the least; then take him out, and anoint his body all over with Nerve oil, Turpentine, and Deers suet mingled together on the fire, and bath his head in the juice of Rue and Camomile.

Then give him to drink old Ale brewed with Cinamon, Ginger, Fenigreek and long Pepper: of each three ounces. As for his diet, let it be warm mashies, sodden wheat and hay, thoroughly carded with a pair of Wool-cards: let him be kept very warm and aired abroad once a day at the least.

If this Convulsion be but only in one member, then it is sufficient, if every day with hard ropes of hay or straw you rub and chafe that part exceedingly, and apply there to a little quantity of the Oyl of Pepper. If the Convulsion be accidental, proceeding of some hurt, whereby the sinew is wounded or pricked; then shall you incontinently take up the sinew so wounded, searching the wound with great discretion, and cut it clean in sunder; then shall you endeavour to heal up the same with unguents, plaisters and balms, as shall be hereafter mentioned in the chapters of wounds and ulcers, of what kinde or nature soever.

### Of the Cold in the Head.

According as the cold which the Horse hath taken, is new or old, great or small, and also according as humors do abound in his head, and as such humors be thick or thin, so is the disease more or less dangerous. For if the Horse callesth little or no matter out of his nose, or hath no very great cough, but only heavy in his head, and perhaps lightly cougheth now and then, it is a sign that he is stopped in the head, which we were wont to call the pole. But if his head be full of humors congested by some extrem cold taken of long time past; and that he callesth foul filthy matter out at the nose, and cougheth grievously, then it is a sign that he hath either the Glaunders, or the Strangulose, mourning of the chein, or Consumption of the Lungs. For all such diseases do breed for the most part of the rheume or distillation that cometh from the head. Of the cures thereof we leave to speak, until we come to talk of the diseases in the throat, minding here to shew you how to heal the pole or cold before mentioned.



*Martin* saith, it is good to purge his head, by perfuming him with Frankincense, and also to provoke him to sneeze, by thrusting two Goose feathers dipt in Oyl-de-bay up into his nostrils, and then to trot him up and down half an hour, for these feathers will make him to cast immediately at the nose. *Laurentius Russus* would have him to be perfumed with Wheat, Pennyroyal, and Sage trodden well together, and put into a bag so hot as may be; which bag would be to close fastened to his head, that all the savour thereof may ascend up to sneeze, he would have you to binde a soft clout anointed and kept warm; and to provoke him to sneeze, he would have you to binde a soft clout anointed with Sage; or else with Butter and Oyl-de-bay unto a stick, and to thrust that up and down into his nostrils, so high as you may conveniently go, and let him be kept warm, and drink no cold water, his nostrils, so high as you may conveniently go, to boil in his water a little Fenigreek, Wheat, Yea, it shall be good for three or four days, to boil in his water a little Fenigreek, Wheat, meal, and a few Anise-seeds. And every day after that you have purged his head by perfuming him, or by making him to sneeze, cause him to be trotted up and down, either in the warm Sun, or else in the house half an hour, which would be done before you water him, and give him his provender.

#### Of the Cold in the Head.

*Markham.* The pose or cold in a Horse, is the most general disease that hapneth, and is the easiest perceived, both by stopping, rating in the nose, and coughing, the cure thereof is in this sort: If it be but newly taken by some careless regard, and immediately perceived, you shall need no other remedy, but to keep him warm every morning and evening after his water, to ride him forth, and to trot him up and down very fast till his cold break, and then gently to gallop him a little, which moderate exercise with warm keeping will quickly recover him again; but if the cold hath had long residence, then you shall give him this drink three days together: Take of dence in him, and still encrease it, then you shall give him this drink three days together: Take of strong Ale one quart, of the best Treacle six penny-worth, of long Pepper and grains, of each as much beaten to powder, of the juice of Garlick two spoonfuls, boyl all these together, and give it the Horse to drink; so warm as he may suffer it, and then trot him up and down by the space of an hour or more, and keep him warm, giving him to drink no cold water.

#### Of the diseases of the Eyes.

*Blundeville.* Horses eyes be subject to divers griefs, as to be waterish or blood-shotten, to be dim of sight, to have the Pin and Web, and the Haw, whereof some comes of inward causes, as of humors resorting to the eyes, and some of outward, as of cold, heat, or stripes.

#### Of Weeping or Watering Eyes.

*Markham.* This, as *Laurentius Russus* saith, may come sometime by confluence of humors, and sometime by some stripe, whose cure I leave to recite, because it doth not differ from *Martin*'s experience here following: Take of Pitch, Rosen and Masticke, a like quantity, melt them together. Then with a little stick, having a clout bound to the end thereof, and dipt therein, anoint the temple veins on both sides, a handfull above the eyes, as broad as a Tetter, and then clap unto it immediately a few stocks of like colour to the Horse, holding them close to his head with your hand, untill they stick fast unto his head, then let him blood on both sides, (if both sides be infected) a handfull under the eyes. *Russus* also thinketh it good to wash his eyes once a day with pure white wine, and then to blow therein a little of Turpentine, and of Pumice stone, beaten into fine powder.

#### Of Watering Eyes.

*Blundeville.* Watering eyes come most commonly in some stripe or blow, and the cure is thus: Lay unto his temples a plaister of Turpentine and Pitch molten together, then wash his eyes with white Wine, and afterward blow the powder of burnt Allum into the same.

#### Of Blood-shotten Eyes, also for a blow or itching, and rubbing in the Eyes.

*Markham.* *Martin* never used any other medicine, then this water here following, wherewith he did alway: heal the foresaid griefs: Take of pure Rose water, of Malmie, of Fennel water, of each three spoonfuls, of Tutia as much as you can easily take with your thumb and finger, of Cloves a dozen beaten into fine powder; mingle them together, and being luke-warm, or cold if you will, wash the inward part of the eye with a feather dipt therein, twice a day untill he be whole. *Russus* saith, that to blood-shotten eyes it is good to lay the white of an Egge, or to wash them with the juice of Celidony.

#### Another of Blood-shotten Eyes, or any other sore Eye, coming of rheume or other humor.

*Markham.* For any sore eye make this water: Take of the water of Eye-bright, of Rose water, and Malmie, of each three spoonfuls; of Cloves six or seven beaten to fine powder; of the juice of Houleed two spoonfuls; mix all these together, and wash the Horses eyes therewith once a day, and it will recover him.

#### Of dimness of sight, and also for the Pin and Web, or any other Spot in the Eye.

*Blundeville.* If the Horse be dim of sight, or hath any Pearl growing in his eye, or thin film covering the ball of his eye, then *Russus* would have you take of Pumice stone, of Turpentine, and of fat Ointment, of each like weight, and being beaten into very fine powder, to blow a little of that in his eye; continuing so to do every day once or twice, untill he be whole. *Martin* saith, that he always used to blow a little Sandvior into the eye once a day, which simple he affirmeth to be of such force as it will break any Pearl or Web in short space, and make the eye very clear and faire. *Russus* smothereth a number of other medicines, praiseth most of all the powder of a black flint stone.

#### Of the Pin and Web, and other dimness.

*Markham.* For to cure the Pin, Web, Pearl, Film, or other dimness, use this means following: Take of Sandvior, the powder of burnt Allum, and the powder of black flint stone, of each like quantity; and once a day blow a little thereof into the Horses eye, and it will wear away such imperfect matter, and make the eye clear.

#### Of the Haw, called of the Italians, Hungria degli occhi.

*Blundeville.* This is a gristle covering sometime more then one half of the eye: It proceedeth of gross and tough humors, descending out of the head, which Haw, as *Martin* saith, would be cut away in this sort: First pull both the eye-lids open with two several threads, stitched with a needle to either of the lids. Then catch hold of the Haw with another needle and thread; and pull it out so far as you may cut it round the breadth of a penny, and leave the black behinde. For by cutting away too much of the fat and black of the eye, the Horse may many times becometh beare-eyed. And the Haw being clean taken away, squirt a little white Wine or Beer into his eye.

#### Another of the Haw.

*Markham.* A Haw is a gross gristle growing under the eye of a Horse, and covering more then one half of his sight; which if he be suffered will in short time perish the eye: the cure is thus: Lay your thumb under his eye, in the very hollow, then with your finger pull down the lid, and with a sharp needle and three take hold of the Haw, and plucking it out, with a sharp knife, cut it away the compass of a penny, or more, that done, wash the eye with a little Beer.

#### Of Lunatick Eyes.

*Blundeville.* *Vergilius* writeth De oculis Lunaticis, but he sheweth neither cause nor signes thereof, but only saith that the old men tearmed it so, because it maketh the eye sometime to look as though it were covered with white, and sometime clear.

*Martin* saith, that the Horse that hath this disease, is blinde at certain times of the Moon, inasmuch that he seeth almost nothing at all during that time, and then his eyes will look yellowish; yea, and somewhat reddish, which disease according to *Martin*, is to be cured in this sort: First use the plaister mentioned before in the chapter of Waterish or Weeping eyes, in such order as is there prescribed; and then with a sharp knife make two slits on both sides of his head an inch long, somewhat towards the nose, a handfull beneath the eyes; not touching the vein; and with a corner loosen the skin upward the breadth of a groat, and thrust therein a round peece of leather, as broad as a two penny peece, with a hole in the midt to keep the hole open, and look to it once a day, that the matter may not be stopped, but continually run the space of ten days, then take the leather out, and heal the wound with a little flax dipt in the salve here following: Take of Turpentine, of Honey, of Wax, of each like quantity, and boyl them together, which being a little warmed, will be liquid to serve your purpose, and take not away the plaisters from the temples untill they fall away of themselves, which being fallen, then with a small hot drawing Iron, make a star in the midt of each temple, where the plaister did ly. Which star would have whole in the midt made with the button end of your drawing Iron.

Another of Lunatick or Moon-specter to the eye.

Markham.

OF these Lunatick eyes, I have known divers: they are blinde at certain times of the Moon, they are very red, fiery, and full of film; they come with over-riding, and extraordinary heat and fury: the cure of them is thus: Lay upon the Temples of his head a plaister of Fitch, Zen, and Mustick molten together very exceeding hot; then with a little round Iron made for the purpose, burn three or four holes an inch or more underneath his eyes, and anoint those holes every day with Hogs greafe, then put it in his eyes every day with a little Honey, and in short time he will recover his sight.

## Of the Canker in the Eye.

Blundevile.

THIS cometh of a rancid and corrupt blood descending from the head into the eye. The signes You shall see red pimples, some small, and some great, both within and without upon the eye-lids, and all the eye will look red, and be full of corrupt matter. The cure according to *Martin* is thus: First, let him bloud on that side the neck, that the eye is grieved, the quantity of a pottle. Then take of Roch Allum, of green Copperas, of each half a pound, of white Copperas one ounce, and boil them in three pintes of running water, untill the half be consumed, then take it from the fire, and once a day wash his eye with this water being made luke-warm with a fine linnen cloth, and cleanse the eye therewith so oft as it may look raw, continuing thus to do every day untill it be whole.

## Of diseases incident to the Ears, and Poll of the head, and first of an Impostume in the Ear.

IMPOSTUMES breed either by reason of some blow or bruising, or else of evil humors congealed in the ear by some extrem cold; the signes be apparent, by the burning and painful swelling of the ear and part thereabout. The cure according to *Martin* is in this sort. First, ripe the Impostume with this plaister. Take of Linseed beaten into powder, of Wheat flower; of each half a pinte, of Honey a pinte, of Hogs greafe, or Barrows greafe one pound. Warm all these things together in an earthen pot, and stir them continually with a flat stick or slice, untill they be thoroughly mingled and incorporated together, and then spread some of this plaister, being warm, upon a peece of linnen cloth, or soft white leather, so broad as the swelling; and so more, and lay it warm unto it, and so let it remain untill the next day, and then renew it with fresh Ointment, continuing so to do untill it break, then lance the sore, so that it may have pilsse downward, and tent it to the bottom with a tent of flax dipt in this Ointment: Take of Oil of Rosinum, of Oyl Olive and Turpentine, of each two ounces, and mingle them together, and make him a biggen of Canvas to close in the fore, so as the tent with the Ointment may abide within, renewing the tent once a day untill it be whole. But if the Horfe have pain in his ears; without any great swelling or Impostumation, then thrust in a little black Wooll dipt in Oyl of Camomile, and that will heal it.

## Of the Poll-will.

THIS is a disease like a Fistula growing betwixt the ears and the poll or nape of the neck, and proceedeth of evil humors gathered together in that place, or else of some blow or bruise, for that is the weakest and tenderest part of all the head, and therefore soonest offended, which rude Carters do little consider, whilst in their fury they beat their Horses upon that place of the head with their whip-rocks; and therefore no Horse is more subject to this disease than the Cart-horse; and this disease cometh most in Winter season. The signes. You shall perceive it by the swelling of the place, which by continuance of time will break it self, rotting more inward then outward, and therefore is more perillous if it be not cured in time; and the sooner it be taken in hand, the better. The cure according to *Martin* is thus: If it be not broken, ripe it with a plaister of Hogs greafe laid unto it so hot as may be; and make a biggen for the Poll of his head to keep it from cold; which biggen would have two holes open, so as his ears may stand out; and renew the plaister every day once, untill it break, keeping the fore place as warm as may be.

And if you see that it will not break so soon as you would have it, then there as it is softest and most meetest to be opened; take a round hot Iron, as big as your little finger, and sharp at the point, and two inches beneath that soft place, thrust it in a good deepness upward; so as the point of the Iron may come out at the ripest place, to the intent that the matter may descend downward, and come at the neather hole, which would be always kept open; and therefore tent it with a tent of flax dipt in Hogs greafe, and lay a plaister of Hogs greafe also upon the same, renewing it every day once the space of four days, which is done chiefly to kill the heat of the fire.

Then at the four days end, take of Turpentine half a pound, clean washed in nineundry waters, and after that thoroughly dried, by thrusting out the water with a slice on the other side, then put thereunto two yolks of Egges, and a little Saffron, and mingle them well together: that

that done, search the depth of the hole with a whole quill, and make a tent of a peece of sponge, so long as it may reach the bottom, and so big as it may fill the wound, and anoint the tent with the aforesaid Ointment, and thrust it into the wound, either with that quill, or else by winding it up with your finger and thumb, by little and little, untill you have thrust it home: and lay on the plaister of Hogs greafe made luke-warm, renewing it every day once or twice, untill it be whole. But if the swelling cease, then you need not to use the plaister, but only to tent it, and as the matter decreaseth, so make your tent every day lesser and lesser, untill the wound be perfectly whole.

## Of the Vives.

THE Vives be certain kernels growing under the Horses ear, proceeding of some rank or corrupt blood flowing to the place, which within are full of little white grains, like white salt kernels. The Italians call them *Vivole*, which if they be suffered to grow; *Laurentius Ruffus* saith, that they will grievously pain the Horse in his throat, so as he shall not be able to swallow his meat, nor to breathe. They be easie to know, for they may be felt, and also seen: The cure according unto *Martin*, is in this sort: First draw them down in the miditt with a hot iron, from the root of the ear so far as the tip of the ear will reach, being puld down; and under the root again draw two strikes on each side like a broad arrow head; then in the miditt of the first line lance them with a lancet, and taking hold of the kernels with a pair of pincons, pull them so far forward, as you may cut the kernels out without hurting the vein; that done, fill the hole with white Sale. But *Hieracles* would have them to be cured in this sort: Take a peece of Sponge fowled well in strong Vinegar, and binste that to the fore, renewing it twice a day untill it hath rotted the kernels; that done, lance the neathermost part where the matter lyeth, and let it out, and then fill it up with Salt finely brayed. and the next day wash all the filth away with warm water, and anoint the place with Honey and Fitch-floure mingled together. But beware you touch none of the kernels with your bare finger, for feare of venoming the place, which is very apt for a Fistula to breed in.

## Another of the Vives.

THE Vives be certain kernels, growing under the Horses ear, which come of corrupt blood, the cure is diversly spoke and written of; but this is the best mean which I have tried, that if you finde the kernels to enflame and grieve the Horse, take a handful of Sorrel, and lay it in a Bur-dock leaf, and roll it in the hot embers like a Wardell; then being taken out of the fire, apply it so hot as may be to the fore part, suffering it to ly thereunto the space of a day and a night, and then renew it, till such time that it ripen and break the fore; which it will in short space do. When it is broken, and the wilde matter taken away, you shall heal up the fore place with the yolk of an Egge, half a Spoonful of Honey, and as much Wheat-floure as will serve to make it thick, plaister-wise, which being bound thereunto, will in three or four days heal the fame.

## Of the Cankerous Ulcer in the Nose.

THIS disease is a fretting humor, eating and consuming the flesh, and making it all raw within, and not being holpen in time will eat through the gristle of the nose. It cometh of corrupt blood, or else of sharp humors ingendered by means of some extrem cold. The signes be these: He will bleed at the nose, and all the flesh within will be raw, and filthy stinking favours, and matter will come out at the nose. The cure according to *Martin* is thus: Take of green Copperas, of Allum, of each one pound, of white Copperas one quarter, and boil these in a pottle of running water, untill a pinte be consumed; then take it off, and put thereunto half a pinte of Honey: then cause his head to be holden up with a drinking stasse, and squirt into his nostrils with a squirt of bread, or rather of Elder, some of this water being luke-warm, three or four times one after another, but betwixt every squirting, give him liberty to hold down his head, and to blow out the filthy matter, for otherwise perhaps you may choke him. And after this it shall be good also without holding up his head any more, to wash and rub his nostrils with a fine clove bound to a white sticks end, and wet in the water aforesaid; and serve him thus once a day untill he be whole.

## Of bleeding at the Nose.

I HAVE seen Horses my self, that have bled at the nose, which have had neither fore nor ulcer in their nose, and therefore I cannot choose, but say with the Physicians, that it cometh by means that the vein which endeth in that place, is either opened, broken or fettered. It is opened many times by means that blood aboundeth too much, or for that it is too fine, or too subtil and so pierceth through the vein. Again, it may be broken by some violent strain, cut or blow. And finally, it may be fettered or gawned through, by the sharpness of some blood, or else of some other humor congealed there in. As touching the cure, *Martin* saith, it is good to take a pinte of red Wine, and to put therein a quarter of Boie Armony, beaten into fine powder, and being made luke-warm, to pour the one half thereof the first day into his nostril that bleedeth, causing his head to be holden up, so as the liquor may not fall out, and the next day to give him the other half. But if this prevailleth not, then

then I for my part would cause him to be let blood in the breast vein, on the same side that he bleedeth at (several times): then take of Frankincense one ounce, of Aloes half an ounce, and beat them into powder, and mingle them thoroughly with the whites of Egges, until it be so thick as Honey, and with salt Hares hair, thrust it up into his nostril, filling the hole so full, as it cannot fall out; or else fill his nostrils full of Asies dung, or Hogs dung, for either of them is excellent good to restrain any flux of blood.

*Of the bleeding at the Nose, or to stand Flux of blood in any sort.*

Markham.

I Have known many Horses in great danger by bleeding, and I have tried divers remedies for the same, yet have I not found any more certain then this: take a spoonful or two of his blood, and put it in a Sawcer, and set it upon a chafing dish of coals; and let it boyl till it be all dried up into powder, then take that powder, and if he bleed at the nose, with a Cane or Quill blow the same up into his nostrils: if his bleeding come of any wound or other accident, then into the wound put the same powder, which is a present remedy. New Horse-dung, or earth, is a present remedy, applied to the bleeding place; and so are Sage leaves bruised and put into the wound.

*Of the diseases in the Mouth, and first of the bloody Rists, or Chops in the Palat of the Mouth.*

Blundevile.

This disease is called of the *Italian*, *Polatina*: which as *Lawrentius Rustus* saith, cometh by eating hay or provender that is full of pricking seeds, which by continual pricking and fretting the furrows of the mouth do cause them to ranckle, and to bleed corrupt and stinking matter, which you shall quickly remedy, as *Martin* saith, by washing first the fore places with Vinegar and Salt, and then by anointing the same with Honey.

*Of the Bladders in a Horses mouth, which our old Farriers were wont to call the Gigs. The Italians call them Fronselle.*

These be little soft swellings, or rather pustules with black heads, growing in the inside of his lips, next unto the great jaw-teeth, which are so painful unto the Horse, as they make him to let his meat fall out of his mouth; or at the least to keep it in his mouth unchawed, whereby the Horse prospereth not: *Rustus* saith, that they come either by eating too much cold grass, or else pricking, dusty, and filthy provender. The cure whereof, according to *Martin*, is in this sort: Slit them with a lancet, and thrust out all the corruption, and then wash the fore places with a little Vinegar and Salt; or else with Allum water.

*Of the Bladders in a Horses mouth.*

Markham.

Some Horses will have bladders like paps growing in the inside of their lips, next to their great teeth, which are much painful: the cure whereof is thus: Take a sharp pair of shears, and clip them away close to the gum, and then wash the fore place with running water, Allum and Honey boiled together, till it be whole.

*Of the Lampas.*

The Lampas, called of the *Italian*, *Lampasow*, proceedeth of the abundance of blood, resorting to the first furrow of the mouth, I mean that which is next unto the upper fore-teeth, causing the said furrow to swell so high as the Horses teeth, so as he cannot chew his meat, but is forced to let it fall out of his mouth. The remedy is to cut all the superfluous flesh away, with a crooked hot iron made of purpose, which every Smith can do.

*Another of the Lampas.*

Markham.

The Lampas is a thick spongy flesh, growing over a Horses upper teeth, hindering the conjunction of his chops, in such sort that he can hardly eat: the cure is as followeth. Cut all that naughty flesh away with a hot iron, and then rub the fore well with Salt, which the most ignorant Smith can do sufficiently.

*Of the Canker in the mouth.*

Blundevile.

This disease, as *Martin* saith, is a rawness of the mouth and tongue, which is full of blisters, so he cannot eat his meat. Which proceedeth of some unnatural heat, coming from the stomach. For the cure whereof, take of Allum half a pound, of Honey a quarter of a pint, of Columbine leaves, of Sage leaves, of each a handful; boyl all these together in three pints of water, until a pinte be consumed, and wash the fore places therewith so as it may bleed, continuing so to do every day, once until it be whole.

Aunt

*Another of the Canker in the mouth.*

This disease proceedeth of divers causes, as of unnatural heat of the stomach, of foul feeding, or of the rust or venom of some bit or snaffle, and is thus described by *Markham*. The cure is thus: With the fore place with warm Vinegar, made thick with the powder of Allum, two or three dayes together, every time until it bleed, which will kill the passion and vigour of the cankered matter: then make this water, Take of running water a quart, of Allum four ounces, of Honey four or five spoonfulls, of Woodbine leaves, of Sage leaves, and of Columbine leaves, of each half a handful, boyl all these together till one half be consumed, then take it off, and every day with the water warmed, wash the fore until it be whole.

*Of the heat in the mouth and lips.*

Sometime the heat that cometh out of the stomach breedeth no Canker, but maketh the mouth Blundevile. Shot, and causeth the Horse to forsake his meat. The cure whereof, as *Martin* saith, is in this sort: First, turn up his upper lips, and jagge it lightly with a lancet, so as it may bleed, and then wash both that and all his mouth and tongue with Vinegar and Salt.

*Of the tongue being hurt with the bit or otherwise.*

If the tongue be cut or hurt any manner of way, *Martin* saith, it is good first to wash it with Allum water, and then to take the leaves of black Bramble, and to chop them together small with a little Lard, that done, to binde it up in a little clout, making it round like a ball, then having dipt the round end in Honey, rub the tongue therewith: continuing so to do once a day until it be whole.

*Of the Barbles or paps underneath the tongue.*

These be two little paps, called of the *Italian*, *Barbole*, growing naturally (as I think) in every Horses mouth underneath the tongue, in the leather jawes, which if they grow of any length, *Rustus* saith, that they will hinder the Horses feeding, and therefore he and *Martin* also would have them to be clipped away with a pair of shears, and that done, the Horses mouth to be washed with Vinegar and Salt.

*Of the pain in the teeth and gums, of the Wolfs teeth, and Jaw teeth.*

A Horse may have pain in his teeth, partly by descent of humors from his head, down into his teeth and gums, which is to be perceived by the rankness and swelling of the gums, and partly having two extraordinary teeth, called the Wolfs teeth, which be two little teeth growing in the upper jawes, next unto the great grinding teeth, which are so painful to the Horse, as he cannot endure to chew his meat, but is forced either to let it fall out of his mouth, or else to keep it till half chewed, whereby the Horse prospereth not, but waxeth lean and poor, and he will do the like also when his upper Jaw-teeth be so far grown as they overhang the neather Jaw-teeth, and therewith be so sharp, as in moving his jawes they cut and rase the insides of his cheeks, even as they were rased with a knife. And first as touching the cure of the pain in the teeth, that cometh by means of some distillation: *Vegetius* saith, it is good to rub all the outside of his gums with fine chalk and strong Vinegar mingled together, or else after that you have washed the gums with Vinegar, to strew on them of Pomegranate ples. But we think that besides this, there were not unfrequently the temple veins, with the plaiker before mentioned, in the Chapter of weeping and watering eyes. The cure of the Wolfs teeth, and of the Jaw teeth, according to *Martin*, is in this sort: First, cause the Horse head to be tyed up to some staff or post, and his mouth to be opened with a card, so wide as you may easily see every part thereof: Then take a round strong iron tool, like a yard long, and made at the one end in all points like unto the Carpenters gouge, which with he maketh his hole to be bored with a wimble or auger, and with your left hand set the edge of your tool in the foot of the Wolfs teeth, on the outside of the jaw, turning the hollow side of the tool downward, holding your hand readily, so as the tool may not slip from the afore said tooth: then having a mallet in your right hand, strike upon the head of the tool one pretty blow, and then as you shall loosen the tooth, and cause it to bend inward: then having the midst of your tool upon the Horses neather jaw, wrinch the tooth outward, with the inside or hollow side of the tool; and thrust it clean out of his head: that done, serve the other Wolfs tooth on the other side in the same manner, and fill up the empty place with Salt finely brayed. But if the upper jaw teeth do also overhang the neather teeth, and so cut the inside of his mouth as is afore said, then keeping his mouth still open, take your tool and mallet, and pare all those teeth shorter, running along them even from the first unto the last, turning the hollow side of your tool towards the teeth: so shall not the tool cut the inside of his cheeks, and the back or round side being turned towards the forehead cheeks; and that done wash all his mouth with Vinegar and Salt, and let him go,

Blundevile.

Hb

*Why the diseases in the neck, withers, and back, be declared here before the diseases in the throat.*

**H**AVING hitherto spoken of the diseases incident to a Horse's head, and to all the parts there-  
of, natural order requireth that we should now descend into the throat, as a part next  
adjacent to the mouth. But so far as the diseases in the throat have not only affinity with  
the head, but also with the lungs and other inward parts, which are many times grieved by  
means of distillation coming from the head, and through the throat: I will speak of the diseases  
incident to the neck, withers, and back of a Horse, to the intent that when I come to talk of  
such diseases, as Rheumes and distillations do cause, I may discourse of them orderly without  
interruption.

*of the Crick in the neck.*

**B**ECAUSE a Crick is no other thing then a kinde of Convulsion, and for that we have spoken suffi-  
ciently before of all kindes thereof in the Chapter of Convulsion, I purpose not here therefore  
to trouble you with many words, but only shew you *Ruffus* opinion, and also *Martin* experience  
therein. The Crick then called of the *Italian*, *Seima*, or *Luerdo* according to *Ruffus*, and according  
to *Martin*, when the Horse cannot turn his neck any manner of way, but hold it still right forth,  
inasmuch as he cannot take his meat from the ground but by times, and that very slowly; *Ruffus*  
saith, it cometh by means of some great weight laid on the Horse's shoulders, or else by overmuch  
sweat, it cometh by means of some great weight laid on the Horse's shoulders, or else by overmuch  
drying up of the sinews of the neck. The cure whereof, according to *Martin*, is in this sort. Draw  
him with a hot iron from the root of the ear on both sides of the neck, through the middle of the  
same even down to the breast, a straw deep, so as both ends may meet upon the breast, then make  
a hole in his forehead, hard under the foretop, and thrust in a Cornet upward betwixt the skin and  
the flesh a handfull deep, then put in a Goose feather, doubled in the midst and anointed with Hogs  
grease to keep the hole open, to the intent the matter may run out the space of ten dayes. But  
every day during that time, the hole must be cleansed once, and the feather also cleansed and fresh  
anointed, and so put in again. And once a day let him stand upon the bit one hour or two, or be  
ridden two or three miles abroad, by such a one as will bear his head, and make him to bring it in.  
But if the Crick be such as the Horse cannot hold his neck straight; but clean awry, as I have seen  
sundry my self, then I think it not good that the Horse be drawn with a hot iron on both sides of the  
neck, but only on the contrary side. As for example, if he bend his head toward the right side, then  
to draw him as is aforesaid only on the left side, and to use the rest of the cure as is aforesaid, and  
need be, you may spend him also, with handsome slaves meet for the purpose, to make his neck  
stand right.

*of Wens in the neck.*

**A**WEN is a certain kinnell like a tumor of swelling, the inside whereof is hard like a gristle, and  
spongy like a skin full of wrets. Of Wens, some be great, and some be small. Again, some  
be very painful, and some not painful at all. The Physicians say, that they proceed of grosse and  
vicious humors; but *Vegetius* saith, that they chance to a Horse by taking cold, or by drinking of  
waters that be extreme cold. The cure according to *Martin* is thus. Take of Mallows, Sage, and  
red Nettles, of each one handfull, boil them in running water, and put thereunto a little Butter  
and Honey, and when the Herbs be soft, take them out and all to bruise them, and put thereunto  
of oil of Bay two ounces, and two ounces of Hogs grease, and warm them together over the fire,  
mingling them well together; that done, plaister it upon a piece of leather so big as the Wen, and  
lay it to so hot as the Horse may endure it, renewing it every day in such sort, the space of eight  
dayes, and if you perceive that it will come to no head, then lance it from the middle of the Wen down-  
wards, so deep as the matter in the bottom may be discovered and let out; that done, heal it up  
with this Salve. Take of Turpentine a quarter, and wash it nine times in fair new water, then put  
thereunto the yolk of an Egge and a little *English* Saffron beaten into powder, and make a ointment  
of Flax, and dip it in that ointment, and lay it unto the fore, renewing the same every day  
once until it be whole.

*of swelling in the neck after blood-letting.*

**T**HIS may come of the seam being rusty, and so causing the vein to rankle, or else by means of  
some cold wind striking suddenly into the hole. The cure according to *Martin* is thus. First  
anoint it with oil of Camomile warmed, and then lay upon it a little hay wet in cold water, and bind  
it about with a cloth, renewing it every day the space of five dayes, to see whether it will grow up  
head, or else vanish away. If it grow to a head, then give it a slit with a lancet, and open it with a  
Cornet that the matter may come out. Then heal it up, by tamping it with Flax dipped in Turpentine  
and Hogs grease molten together, dressing it so once a day until it be whole.

*How to staunch blood.*

**I**F a Horse be let blood when the signe is in the neck, the vein perhaps will not leave bleeding so  
soon as a man would have it, which is any such thing chance, then *Ruffus* saith, it is good to  
bind thereunto a little new Horse dung tempered with chalk, and strong Vinegar, and not to re-  
move it from thence the space of three dayes, or else to lay thereunto burnt silk, felt, or cloth, for  
all such things will staunch blood.

*of the falling of the Crest.*

**T**HIS cometh for the most part of poverty, and specially when a fat Horse falleth away suddain-  
ly. The cure according to *Martin* is thus. Draw his Crest the deepness a straw, on the con-  
trary side with a hot iron, the edge of which iron, would be half an inch broad, and make your  
beginning and ending somewhat beyond the fall, so as the first draught may go all the way hard upon  
the edge of the mane, even underneath the roots of the same, bearing your hand right downward, into  
the neckward, then answer that with another draught beneath, and so far distant from the first as the  
fall is broad, compassing as it were all the fall, but still on the contrary side: and betwixt those two  
draughts right in the midst, draw a third draught, then with a button iron of an inch about, burn  
at each end a hole, and also in the spaces betwixt the draughts, make divers holes distant three fin-  
gers broad one from another: that done, to shake the fire anoint it every day once, for the space of  
nine dayes, with a feather dipped in fresh Butter molten. Then take Mallows and Sage, of each one a  
handfull, boil them well in running water, and wash the burning away until it be new flesh then dry it  
up with this powder: Take of Honey half a pint, and so much unbeck't lime as will make that Honey  
thick like paste; then hold it in a fire-pan over the fire until it be baked so hard as it may be made in  
powder, and sprinkle that upon the fore places.

*of the falling of the Crest.*

**T**HE falling of the Crest is occasioned most commonly through poverty; yet sometimes I have  
seen it chance through the ill proportion of the Crest, which being high, thick and heavy, the  
neck thin and weak underneath, is not able to support or sustain it up, however it be there is remedy  
for both: if it proceed of poverty, first try by good keeping to get it up again, but if it will not rise,  
or that the original of the disease be in the ill fashion of the Crest, then let this be the cure. First with  
your hand raise up the Crest as you would have it stand, or rather more to that side from which it  
declineth, then take up the skin between your fingers on that side from which the Crest swarveth,  
and with a sharp knife cut away the breadth of very near an inch, and the length of four inches;  
which done, stitch up the skin together again with three or four stitches, and by means of strings,  
weights, or other devices, keep the Crest perforce on that side, applying thereunto a plaister of  
Deers sweat and Turpentine, boiled together, till the sore be healed; and at the self same instant, that  
by this manner of incision you draw together and straiten the skin on that side, you shall in this sort  
give liberty to the other side, whereby the Crest may the easier attain to his place. Take a hot iron  
made in fashion of a knife, the edge being a quarter of an inch broad, and therewith from the upper  
part of his Crest unto the neather part of the same extending towards his shoulder, draw three lines in  
this forme: and the same anoint daily with fresh Butter, until such time as it be perfectly whole.  
By this manner of cure, you may make any lame ear'd Horse to be as prick-ear'd and  
comely, as any other Horse whatsoever.

*of the manginess of the Mane.*

**T**HE manginess proceedeth of rankness of blood, or of poverty, or of lowliness, or else of rubbing  
where a mangy Horse hath rubbed, or of filthy dust lying in the mane for lack of good dressing.  
The signes be apparent by the itching and rubbing of the Horse, and the Scabs fretting both flesh  
and skin. The cure according to *Martin*, is thus. Take of fresh grease one pound, of Quicksilver half  
an ounce, of Brimstone one ounce, of Rape oil half a pint, mingle them together, and stir them con-  
tinually in a pot with a slice, until the Quicksilver be so wrought with the rest, as you shall perceive  
no Quicksilver therein. That done, take a blunt knife, or an old Horse-comb, and scratch all the  
mangy places therewith until it be raw and bloody, and then anoint it with this ointment, in the man-  
ner it may be, to the intent the ointment may sink in: or else hold before it in a fire-pan or some  
broad bar of iron made hot, to make the ointment to melt into the flesh. And if you see that within  
the space of three dayes after, with this once anointing, he leave not rubbing, then mark in what  
place he rubbeth, and dress that place again, and you shall see it heal quickly.

## Of the falling of the hair of the Mane.

**I**T falleth for the most part, because it is eaten with little Wormes, fretting the roots in funder; whish, according to *Martin*, you shall remedy in this sort; Anoint the mane and Crest with Soap, then make strong lie and wash all the mane and Crest withall, and that will kill the Wormes, within twice or thrice washing.

## Of griefs in the withers.

**T**O a Horfies withers and back, do chance many griefs and forances, which, as *Ruffus* saith, do sometime proceed of inward causes, as of the corruption of humors; and sometime of outward causes, as through the galling and pinching of some naughty saddle, or by some heavy burthen laid on the Horfies back, or such like. And of such griefs, some be but superficial blisters, swellings, light-galls or bruifings, and be easily cured. Some again do pierce to the very bone, and be dangerous, and especially if they be rough the back bone; let us first then shew you the cure of the smaller griefs, and then of the greater.

## Another of blisterings; or small swellings in the withers or back and galling.

Blundeville.

**W**hensoever you see any swelling rise, then *Martin* would have you to binde a little hot Horfe dung unto it, and that will assuage it. If not, then to prick it round about the swelling either with a steem, or else with a sharp pointed knife not too deep, but so as it may pierce the skin, and make the blood to issue forth. That done, take of Mallowes or else of Smiallage, two or three handfulls, and boile them in running water untill they be so soft as pap; then strain the water from it, and bruite the herbs in a trean dish, putting thereunto a little Hogs greafe, or else Sallet oil, or Sheeps sewer, or any other fresh greafe, boile them and stir them together, not frying them hard, but so as it may be soft and supple, and then with a clout lay it warm upon the sore, renewing it every day once untill the swelling be gone. For this will either drive it away, or else bring it into his head, which lightly chaunceth not, unless there be some gristle or bone perished.

*Ruffus* biddeth you, so soon as you see any swelling rise, to shave the place with a razor, & lay thereunto this plaister; Take a little Wheat flower and the white of an Egge beaten together, and spread it on a little clout, which being laid unto the swelling two or three dayes and not removed, will bring it to a head, and when you come to take it off, pull it away so softly as you can possible; and whereas you see the corruption gathered together, then in the lowest place thereof, pierce it upward with a sharp iron somewhat hot, that the corruption may come out, and anoint the sore place every day once with fresh Butter, or Hogs greafe; but if the skin be only chafed off without any swelling, then wash the place with Water and Salt, or else with warm Wine, and sprinkle this powder thereon; Take of unlesck't Lime beaten into fine powder, and bake them in a fire-pan over the fire, untill they be so hard as they may be brought to powder, for this is a very good powder to dry up any galling or sore. The powder of Myrrhe or burnt silk, felt, or cloth, or any old poft, is also good for such purposes; but whensoever you use this powder of Lime and Hony, let the place be washed, as is aforesaid.

## Of great swellings and inflammations in a Horfies withers.

**I**F the swelling be very great, then the cure according to *Martin* is thus; First draw round about the swelling with a hot iron, and then crosse him with the same iron in manner of a checker, then take a round hot iron having a sharp point, and thrust it into the swelling place on each side up toward the point of the withers; to the intent the matter may issue downward at the holes. That done, tent both the holes with a tent dipt in Hogs greafe to kill the fire, and also anoint all the other burnt places therewith, continuing so to do untill the swelling be asswaged, renewing it every day once, untill the fiery matter be clean fallen away, and then tent him again with washed Turpentine mingled with yolks of Egges and Saffron in such manner as hath been aforesaid, renewing the tent every day once until it be whole.

If you see that the swelling for all this go not away, then it is a signe of some impostumation within, and therefore it shall be necessary to lance it, and to let out the corruption; then take of Hony half a pinte, of Verdigrease two ounces beaten to powder, and mingle it together with the Hony, then boile them in a pot untill it look red, then being lukewarm, make either a tent or plaister, according as the wound shall require, renewing the same every day once, untill it be whole. But the sore may be so vehement, that for lack of looking in time, it will pierce downward betwix both shoulders toward the intrails, which is very dangerous: yea, and as *Ruffus* saith, mortal, because the corruption of the sore infecting the lungs and heart (which be the vitall parts and chief preservers of life) the body must needs decay. And therefore *Martin* would have you to fill the hole with the Salve last mentioned, and to thrust in afterward a piece of a sponge;

sponge, as well to keep the hole open, as also to suck out the corruption, renewing it every day once untill it be whole.

## Of the horfies hard knobs growing under the saddle side.

**T**his is a dead skin like a piece of leather, called of the *Italians*, *Corno*, that is to say, a horn, *Blundeville*. for that it is hard under hand, and cometh by means of some strait Saddle, pinching the Horfe more on the one side, then on the other; or else on both sides equally. The cure whereof according to *Martin*, is in this sort; Anoint them with fresh Butter or Hogs greafe, untill they be mollified and made soft, as you may either cure them, or pull them away, and then wash the wound with warm Ale, or with white Wine, and dry it with powder of unlesck't Lime mixt with Hony.

## Of Wens or knobs growing about the saddle skirts.

**T**Hese be great hard knobs growing most commonly betwix two ribs, apparent to the eye, which by their hardnes seem to come of some old bruise, and are called of the *Italians*, *la Cui*. The cure whereof, according to *Martin*, is thus; First mollifie them, by anointing them with Hogs greafe every day once or twice, the space of eight dayes, and if you perceive that it will come to a head with this, then lance it from the middle downward, that the matter may come out; then rent it with washed Turpentine, yolks of Egges, and Saffron mingled together as is aforesaid, renewing the tent every day once until it be whole.

## Of the Navil gall.

**T**He Navil gall, is a bruise on the back behinde the Saddle right against the Navil of the Horfe, and thereof taketh his name; It cometh either by splitting of the Saddle behinde, or for lack of stuffing, or by means of the hinder buckle fretting that place, or else by some great weight laid on his back; you shall perceive it by the puffed up and spungy flesh, looking like rotten Lights or Lungs, and therefore is called of the *Italians*, *Palmone*, or *Pumponista*. The cure whereof, according to *Martin*, is thus; Cut it round about with a sharp knife or razor even to the bone, leaving no rotten flesh behinde; that done, take the white of an Egge and Salt beaten together, and lay that plaisterwise to the sore upon a little tow, renewing it once a day the space of two dayes. Then take of Hony a quartern of a pinte, and of Verdigrease an ounce beat into powder, and boile them together in a pot, stirring it till untill it look red, and being lukewarm, make a plaister with tow and clap it to the wound, washing and cleansing well the wound first with a little warm Vinegar or white Wine, continuing it once a day untill it begin to heal and skin, then dry it up, by sprinkling thereon this powder following; Take of Hony a quartern, and as much of unlesck't Lime as will thicken the Hony like unto paste, and in a fire-pan over the fire, stir it still untill it be hard baked, so as it may be beaten into powder, but before you throw on the powder, wash the wound first with warm Vinegar, continuing so to do untill it be perfectly skinned and whole.

## Of the swaying of the back.

**T**his is called of the *Italians*, *Messerute*, and according to *Ruffus* and *Martin* opinions, cometh either by some great strain, or else by heavy burthens; you shall perceive it by the reeling and rolling of the Horfies hinder parts in his going, which will laster many times, and sway sometimes backward, and sometime sideling, and be ready to fall even to the ground, and the Horfe being laid, is scant able to get up. The cure, according to *Martin*, is thus; Cover his back with a Sheeps skin, coming hot from the Sheeps back, laying the fleshy side next unto his back, and lay a housing cloth upon the same to keep his back as warm as may be, and so let it continue untill it begin to smell; then take the old skin away, and lay a new unto it, continuing so to do the space of three weeks. And if he amend not with this, then draw his back with a hot iron out on both sides of the ridge of his back, from the pitch of the Buttocks, unto a handfull within the Saddle, and let every line be an inch distant one from another, and then again overthwart checkers, but let not such strokes be over deep, and so burned as every one look yellow, then by this charge following; Take Pitch one pound, of Rozen half a pound, of Bole Armony half a pound made in powder, and half a pinte of Tar, and boile all these together in a pot, stirring it untill every thing be molten and thoroughly mingled together, then being lukewarm, dawb all the burning therewith very thick, and thereupon clap as many hocks of the Horfies colour, as you can make to abide on, and remove it not before it fall away it self, and if it be in Summer, you may tuck him to graffe.

## Of the weakness in the back.

It doth appear by *Laurentius Ruffus*, that there is another kind of weakness in the back, called in *Italian*, *le gotte* or *moriscatura de le reni*; that is to say, the fretting or biting of the reins, which as the said *Ruffus* saith, proceedeth of abundance of humors resorting to that place, whereby all the hinder parts of the Horse do lose their feeling and strength, and the Horse falleth down on the ground; yea, and such humors resorting to the heart, do suffocate the same, and in two or three hours do cause the Horse to die. The remedy, according to *Ruffus*, is in this sort: Let him blood abundantly in the neck, and draw his back with a hot iron, in such sort as is declared in the last Chapter. He saith also it is good to make him swim through a river, and to rowel him on his hanches nigh the huckle bones; and to make the hair to grow again, it is good, as he saith, to anoint the place with Hogs greafe, and three leaved graffe stamped together.

## Of Hidebound.

Hidebound, is when the skin cleaveth so fast to the Horses back, that a man cannot pull it from the flesh with his hand; which *Ruellius* calleth *Coriogo*; it cometh for the most part of poverty, or else when the Horse after some great heat hath been suffered to stand long in the rain or wet weather, for that will cause the skin to shrink, and to cling to his ribs. It is known by the leanness of the Horse, and gantness of his belly, and by fast sticking of the skin unto the ribs when you put at it with your hand. The cure, according to *Martin*, is thus: Let him blood on both sides the belly in the flank veins betwix the flank and the girding place: that done, give him this drink; Take a quart of the flank veins betwix the flank and the girding place: that done, give him this drink; Take a quart of white Wine, or else of good Ale, and put thereunto three ounces of good Sallet Oil, of Camin one ounce, of Annis seeds two ounces, of Licorais two ounces, beaten all into fine powder, and give it him lukewarm with a horn. And when he hath drunk, let one standing at his huckle bone, rub him hard with his hand along the back, and overthrow the ribs, the space of half an hour: that done, set him in a warm stable, and let him stand in litter up to the belly, and cover all his back and ribs with a sack first, thoroughly soaked in a tub of cold water, and then well and hard wrung, and over that cast another cloth, and gird it fast with a surcingle, stuffing him well about the back with fresh straw, continuing thus to do every day once the space of a week, during which time give him no cold water, but lukewarm, and put therein a little ground Maile: The wet sack will cause the back to gather heat it self, and the skin to loosen from the flesh, and if you will bestow more coyl, you may anoint all his body with Wine and oil mingled together, according to the opinion of the old writers, which no doubt is a very comfortable thing, and must needs supple the skin, and loose it from the flesh.

## Of the diseases in the throat and lungs, and why the griefs of the shoulders and hips be not mentioned before amongst the griefs of the withers and back.

Blindwrite.

Some perhaps would look here, that for so much as I have declared the diseases of the neck, Withers and back, that I should also follow on now with the griefs of the shoulders and hips. But sith that such griefs for the most part doe cause a Horse to halt, and that it requirith some skill to know when a Horse halteth, whether the fault be in his shoulder, hip, leg, joint, or foot, I think it is not good to separate those parts asunder, specially sith nature hath joyned them together, thers to say, the shoulders to the forelegs, and the hips to the hinder legs. And therefore according to natures order, I will treat of them in their proper place; that is to say, after that I have shewed all the diseases that be in the inward Horses body, not only above the midriffe, as the diseases of the throat, lungs, breast and heart, but also under the midriffe, as those of the stomach, liver, guts, and of all the rest. And first, as touching the diseases of the throat, the Glaunders, and Strangullion, to all Horses is most common.

## Of the Glaunders and Strangullion, so called according to the Italian name Strangullion.

Most Farriers do take the Glaunders and Strangullion to be all one disease, but it is not so, for the Glaunders is that which the Physicians call *Tonsilla*, and the Strangullion is that which they call in *Latine*, *Angina*, in *Greek*, *Gynanch*, and we commonly call it in *English* the Squinancy, or Quinsie. *Tonsilla*, is interpreted by them to be the inflammations of the kernels, called in *Latine*, *Glaunders*, the *Italian*, *Glandules*, which lie on both sides of the throat, underneath the root of the tongue, nigh unto the swallowing place; of which word *Glaunders*, or *Glandule*, I think we borrow this name Glaunders; for when the Horse is troubled with this disease, he hath great kernels underneath his jawes, easie to be seen or felt, paining him so, as he can not easily swallow down his meat, which cometh first of cold distillations out of the head: But if such kernels be not inflamed, they will perhaps go away of themselves, or else by laying a little hot horse-dung and straw unto them, the warmth thereof will dissolve them, and make them to vanish away.

But if they be inflamed, they will not go away, but encrease and wax greater and greater, and be more painful every day then other, and cause the Horse to cast continually filthy matter at his Nose. The cure whereof, according to *Martin*, is this: First ripe the kernels with this plaister; Take of bran two handfulls, or as much as will thicken a quart of Wine or Ale: then put thereunto half a pound of Hogs greafe, and boyl them together, and lay it hot to the fore with a cloth, renewing it every day until it be ready to break, then lance it, and let out all the matter, and tent it with a little of Flax dip in this salve; Take of Turpentine, of Hogs greafe, of each like quantity, and a little wax, and melt them together, and renew the tent every day until it be whole. *Laurentius Ruffus* saith, that this disease is very common to Colts, because in them doth abound fluxible moisture, apt to be dissolved with every little heat, and to turn to purification: and therefore if the Horse be not over young, he would have you first to let him blood in the neck vein, and then to make the same fore a ripening plaister, made of Mallowses, Linseeds, Rew, Wormwood, ground Ivy, Oyl of Bayes, and Dialthea, and to anoint his throat also, and all the fore place with fresh Butter: and the fore being ripe, to lance it, or else to rowel it, that the matter may come forth.

But if the kernels will not decrease, then pull them away by the roots, and dry up the Ulcerous place with an ointment made of unbleck't Lime, Pepper, Brimstone, Nitrum, and Oyl Olive. It shall be also good to purge his head by perfuming him every day once, in such sort as hath been before declared. And let the Horse be kept warm about the head, and stand in a warm stable, and let him drink no cold water: but if you see that after you have taken away the kernels, the Horse doth not for all that leave casting filthy matter at the Nose, then it is to be feared that he hath some spice of the mourning of the Chine, for both diseases proceed of one cause, and therefore I think good to speak of it here presently.

But first I will set down a drink which I have seen proved upon a Horse that I thought could never have been recovered of the same disease, and yet it did recover him in very short space, so as he travelled immediately after many miles, without the help of any other medicine.

## A drink for the Strangullion or Glaunders.

Take of warm milk as it cometh from the Cow a quart, or in stead thereof a quart of new Beer or Ale warmed, and put thereunto of moultin Butter the quantity of an Egge; and then take one head of Garlick, first cleane pilled and then stamped small, which you must put into the milk or drink being made lukewarm, and give it the Horse with a horn, and immediately after the drink be given, catch hold of his tongue with your hand, and having broken two raw Egges, either upon his foreteeth, or against the staffe wherewith his head is holden up, cast those broken Egges, shels and all into his throat, making him to swallow down the same: that done, ride him up and down till he begin to sweat, then let him up covered warm with an old coverlet and straw, not suffering him to eat nor drink for the space of two or three hours after, and let him drink for the space of two or three dayes be somewhat warm, whereunto it is good to put a handfull or two of Bran or ground Maile, and in giving the said drink, it shall not be amisse to powre some thereof into either Nostril.

## Of the mourning of the Chine.

This word, Mourning of the Chine, is a corrupt name borrowed of the French tongue, wherein it is called *Morte despien*, that is to say, the death of the back. Because many do hold this opinion, that this disease doth consume the marrow of the back; for remedy whereof, they use strange kinds of cures. For some taking it to be a rheume, go about to stop it, by laying adstringive, or binding charges to the nape of the neck. Some again, do twine about the pith of the back with a long wire thrup up into the Horses head, and so into his neck and back, with what reason I know not. Well, I know that few Horses do recover that have this disease. Some again think that the Lungs of the Horse be rotten, and that the Horse doth cast them out at his Nose. But *Martin* saith, that he hath cut up divers Horses which have been judged to have dyed of the mourning of the Chine, but he could finde never either Back or Lungs to be perished, but only the Liver, and most commonly that side of the Liver which answereth the Nostril whereth he casteth, whereof we will talk in his proper place, when we come to speak of the diseases in the Liver. The *Italians* do call this disease *Ciamorro*, the old Authors do call it the moist malady, whereof *Thronius* maketh two differences. For in the one the matter which he doth cast at the Nose is white, and doth not smell at all: and in the other, than which he casteth is filthy and stinking corruption. They proceed both of cold humors congealed in the head, but more abounding in the one than in the other: by reason perhaps that the Horse was not cured in time: for of cold first cometh the *Phlegm*, and the *Spittle*, then the Glaunders, and last of all the Mourning of the Chine. When the Horse casteth matter at the Nose that is not stinking, he may easily be cured by such remedies as have been before declared in the Chapter of the Pile; but if the matter be very filthy, and stinking, then it is very hard to cure. Notwithstanding it shall not grieve us to write unto you here, the experience of *Thronius*, and of *Laurentius Ruffus*. *Thronius* cure is thus: Take of Water and Honey,



called of the Physicians *Hydromel*, a quart, and put thereunto three ounces of Oyl, and powre that into his Nostrils: every morning the space of three dayes; and if that do not profit him, then let him drink every day; or once in two dayes, a quart of old Wine, mingled with some of the medicine; or rather the precious meat, called of the old writers *Tetrapermacum*, and that will restore him to his former estate. *Laurentius Russius* saith, that of all diseases there is none more perillous; not more to be suspected, then the rheume which cometh of cold, for Horses have large Conduites; and are full of moisture, and therefore if cold once enter, it findeth matter enough to work on, to breed continual distillation, as well outwardly at the Nose, as inwardly, descending down to the vittal part in such sort, as it doth not suffocate the same.

The signes, according to the said *Russius*, be these; the Horse doth cast matter continually at the Nose, sometime thin, and sometime thick; his Nostrils, Ears, and all his outward parts, will be cold to the feeling, his eyes, head, and all his body heavy, and he will cough; and have small Appetite to his meat; and lesse to his drink, and sometime he will tremble and shake. His cure is in this sort; Purge his head, partly by perfuming him, & partly by making him to sneeze in such sort as hath been before taught in the Chapter of the Nose, which wayes of perfuming and purging his head as they be good; so doth *Russius* praise these two here following to be most excellent; the first is this: Take of the stalks of *Vitis alba*, otherwise called *Bronie*, or wilde Vine, two or three good handfulls, and being bruised put them into a linnen bag, and fasten the bag to the Horses head, so as he may receive the sent up into his Nostrils, without touching the head with his mouth, and this will cause the humors to run down abundantly. The second medicine; Take of Euforbium beaten into fine powder, three ounces, of the juice of Betes one pound, of Swines blood half a pound, boyl into these together until they be thoroughly mingled together, and liquid like an ointment, and then take it from the fire, and put thereunto one ounce more of Euforbium, and mingle them again thoroughly together, and preserve the same in a box, to use at needfull times in this sort; Make two or three long rolls or rampins of linnen clouts, or such like stuffe, sharp pointed like Sugar-bayes: which rampins are called of the Physicians in *Latin*, *Pess*, and being anointed with the ointment aforesaid, thrust them up into the Horses Nostrils, and let them abide there in a pretty while, then pull them out, and you shall see such abundance of matter come forth at his Nose, as is marvellous to behold. *Russius* also praiseth very much this medicine here following.

Take as much of the middle bark of an Elder tree, growing on the water side, as will fill a new earthen pot of a mean size, putting thereunto as much clear water as a pot will hold, and let it boyl until one half be consumed, and then to be filled up again with fresh water, continuing so to do three times one after another, and at the last time that the one half is consumed; take it from the fire, and strain it through a linnen cloth. Then take two parts of that decoction, and one part of Hogs grease, or Butter, and being warmed again together, give the Horse to drink thereof one hornfull, and powre another hornfull into his Nostril that catcheth; and whensoever you give him this medicine, let the Horse be empty and fasting; and keep him without meat also two or three hours after, for this is a very good drink for any sickness that cometh of cold. Moreover, open the skin of his forehead, and of his temples, and also of his tail with a sharp hot iron, that the corrupt humors may issue outward. That done, take hot bricke, or else a pan of fresh butting coles, and hold it nigh unto his belly and flanks, to the intent that they may be thoroughly warmed, and being so warmed, anoint them all over with Oyl-de-bay, or Dialthea, to defend his body from the cold, and let his head be well covered, and all his belly kept warm. Yea, and it were good to bathe his head sometime, as *Russius* saith, with a bath made of Rew, Wormwood, Sage, Yarrow, Bay leaves, and Hyssop. And let his drink be warm water mingled with Wheat meal; yea, and to make it the more comfortable, it were good, as *Russius* saith, to put thereunto some Cinnamon, Ginger, Galengale, and such hot pices. And his meat in Winter season would be no other, but foddren Corn, or warm Mashies, made of ground Malt and Wheat-bran: in Summer season, if he went to grasse, I think it would do him most good, so that he go in a dry warm ground, for by feeding alwayes downward, he shall purge his head the better, as *Russius* saith. Thus much of the Glanders, and mourning of the Chinc. Now we will speak somewhat of the Strangulion, according to the opinion of the Authors, though not so the satisfaction of many English Partlars.

#### Of the Strangulion or Squinancy.

The Strangulion, called of the *Latines*, *Angina*, according to the Physicians, is an inflammation of the inward parts of the throat, and as I said before, is called of the *English*, *Squinancy*, which is as much to say in *English* as Strangling, whereof this name Strangulion, I think is derived, for this disease doth strangle every Man or Beasty; and therefore is numbered amongst the most perillous and sharp diseases, called of the *Latines*, *Morbis acuti*, of which strangling, the Physicians in Mans body make four differences; The first and worst is, when no part within the mouth nor without, appeareth manifestly to be inflamed; and yet the patient is in great pain of strangling. The second is, when the inward parts of the throat only be inflamed. The third is, when the inward and outward parts of the throat be both inflamed. The fourth is, when the whole of the

neck are inflamed, or the inward joynts thereof so loosened, as they straiten thereby both the throat, or wind-pipe; for short breath is incident to all the four kinds before recited, and they proceed all of one cause; that is to say, of some cholerick or bloody fluxion, which comes out of the branches of the throat veins into those parts; and there breedeth some hot inflammation. But now to prove that a Horse is subject to this disease, you shall hear what *Abstrus*, *Hierocles*, *Vegilius*, and others do say. *Abstrus* writing to his friend a certain Parriar or Horse-leach, called *Astiscus*, speaketh in this manner: When a Horse hath the Strangulion it quickly killeth him; the signes whereof be these; His temples will be hollow, his tongue will swell and hang out of his mouth, his eyes also will be swollen, and the passage of his throat stop so as he can neither eat nor drink. All these signes be also confirmed by *Hierocles*.

Moreover, *Vegilius* rendereth the cause of this disease, affirming that it proceedeth of abundance of fuble blood, which after long travel will inflame the inward or outward muscles of the throat or wind-pipe; or such effluence of blood may come, by use of hot meats after great travel, being so alterative, as they cause those parts to swell in such sort, as the Horse can neither eat nor drink nor draw his breath. The cure, according to *Vegilius*, is in this sort: First bathe his mouth and tongue in hot water, and then anoint it with the gall of a Bull; that done, give him this drink. Take of old Oyl two pound, of old Wine a quart, nine Figs, and nine Leeks heads well stamped and brayed together. And after you have boiled these a while before you strain them, put thereunto a little Nitrum Alexandrinum, and give him a quart of this every morning and evening. *Abstrus* and *Hierocles* would have you to let him blood in the palate of his mouth, and also to powre Wine and Oyl into his Nostrils, and also give him, to drink this decoction of Figs and Nitrum foddren together, or else to anoint his throat within with Nitre, Oyl, and Honey, or else with Honey and Hogs dung mingled together, which differeth not much from *Galen* his medicines; to be given unto man. For he saith, that Honey mingled with the powder of Hogs dung that is white, and swallowed down, doth remedy the Squinancy presently. *Abstrus* also praiseth the ointment made of Bellium, and when the inflammation beginneth somewhat to decrease, he saith it is good to purge the Horse; by giving him wilde Cucumber and Nitre to drink. Let his meat be grasse if it may be gotten, or else wet hay, and sprinkled with Nitre. Let his drink also be lukewarm water, with some Barley meal in it.

#### Of the Cough.

Of Coughs, some be outward, and some be inward: Those be outward which do come of outward causes, as by eating a feather; or by eating dusty or sharp straw, and such like things; which tickling his throat, causeth him to cough: you shall perceive it by wagging and wrying his head in his coughings, and by stamping sometime with his foot, labouring to get out the thing that grieveth him; and cannot. The cure, according to *Marin*, is this: Take a Willow wand, rolled throughout with a fine linnen clout, and then anoint it all over with Honey, and thrust it down his throat, drawing your hand to and fro, to the intent it may either drive down the thing that grieveth him, or else bring it up, and do this twice or thrice, anointing every time the stick with fresh Honey.

#### Of the inward and wet Cough.

Of inward Coughs, some be wet, and some be dry. The wet Cough is that cometh of cold, taken after some great heat given to the Horse, dissolving humors, which being afterward congealed, do cause obstruction and stopping in the Lungs: And I call it the wet Cough, because the Horse in his coughing will void moist matter at his mouth after that it is once broken. The signes be these; The Horse will be heave, and his eyes will run with water, and he will forsake his meat; and when he cougheth, he thrusteth out his head, and reacheth with great pain at the first; as though he had a dry Cough, until the steam be broken, and then he will cough more hollow, which is a signe of amendment. And therefore, according to *Marin* experience, to the intent the steam may break the sooner, it shall be necessary to keep him warm, by clothing him with a double cloth, and by licturing him up to the belly with fresh straw; and then to give him this drink; of old Barley one peck, and buylican two or three gallons of fair water, until the Barley begin to burst, and boyl therewith of bruised Kidneys, of Anise seeds or Radishes, of each one pound, then strain it; and to that liquor put of Honey a pinte, and a quarter of Sugareandy, and keep it close in a pot to serve the Horse therewith four several mornings, and cast not away the foddren Barley with the rest of the straining; but make it do every day, & perfume the Horse withal, being put in a bag, and tied to his head, and if the Horse will eat of it, it shall do him the more good; and thus perfuming in Winter season would be used about ten of the clock in the morning, when the Sun is of some height, to the intent the Horse may be walked abroad, if the Sun shines to exercise him moderately. And until his Cough wear away, fail not to give him warm water with a little ground Mault, and let his Cough breaketh more and more, so let his water every day be still warmed then when he is to avoid



## Of the Consumption.

**A** Consumption is no other thing but an exulceration of the lungs, proceeding of some fretting or gnawing humor, descending out of the head into the lungs. And I take it to be that disease which the old Writers are wont to call the dry Malady; which perhaps some would rather interpret to be the mourning of the lungs, which whom I intend not to strive. But then much I must needs say, that every Horse having the mourning of the lungs, doth equanimally call at the nose, but in the dry Malady it is contrary. For all the Authors that write thereof affirm, that the Horse avoideth nothing at the nose. And the signs to know the dry Malady, according to their doctrine, be these: His flesh doth cleave and come away, his belly is gaunt, and the skin thereof so hard stretched, or rather shrunk up, as if you strike him with your hand it will sound like a Taber, and he will be hollow back, and forsake his meat, and though he eateth it, as *Abysnus* saith, yet he doth not digest it, nor profiteth not withal, he would cough and cannot but hicklingly, as though he had eaten small bones. And this disease is judged of all the Authors to be incurable. Notwithstanding they say, that it is good to purge his head with such remedies as have been shewed you before in the Chapter of the Glanders, and also to give him always Coleworts chopt small with his provender. Some would have him to drink the warm blood of sucking Pigs new slain; and some the juice of Lemons; with Oyl and Wine mingled together. Others praise Wine and Frankincense; some, Oyl and Rue; some would have his body to be purged and let to graze.

## Of the Consumption of the Flesh, and how to make a lean Horse fat.

**M**artin saith, that if a Horse take a great cold after a heat, it will cause his flesh to wither, and his skin to wax hard and dry, and so cleave fast to his sides and he shall have no appetite unto his meat, and the fillets of his back will fall away and all the flesh of his buttocks, and of his shoulders will be consumed. The cure whereof is thus: Take two Sheeps heads unskinned, boyl them in three gallons of Ale, or fair running water, until the flesh be consumed from the bones, then drain it through a fine cloth, and then put thereunto of Sugar one pound, of Cinamon two ounces, of Conserve of Roses, of Barberies, of Cherries, of each two ounces, and mingle them together, and give the Horse every day in the morning a quart thereof luke-warm, until all be spent: and after every time he drinketh, let him be walked up and down in the stable, or else abroad if the weather be warm, and not windy, and let him neither eat nor drink in two hours after, and let him drink no cold water, but luke-warm, the space of fifteen days, and let him be fed by little and little, with such meat as the Horse hath most appetite unto. But if the Horse be neeth and tender, and so wax lean without any apparent grief or disease, then the old Writers would have him to be fed now and then with parched Wheat, and also to drink Wine with his water, and eat continually Wheat-bran mingled with his provender, until he wax strong; and he must be often dressed and trimmed, and ly soft, without the which things his meat will do him but little good. And his meat must be fine and clean, and given often and by little at once. *Ruffus* saith, that if a Horse eating his meat with good appetite, doth not for all that prosper, but is still lean: then it is good to give him Sage, Savin, Bay-berries, Earth-nuts, and Botres-grease, to drink with Wine: or to give him the intrails of a Barbel or Tench, with white Wine. He saith also that sodden Beans mingled with Bran and Salt, will make a lean Horse fat in very short space.

## Of greiv in the Breast.

**L**audentius *Ruffus* writeth of a disease called in Italian, *Gravexa di petto*, which hath not been in experience amongst our Farriers, that I can learn. It comes, as *Ruffus* saith, of the superfluity of blood, or other humors dissolved by some extrem heat, and resorting down the breast, paining the Horse, so as he cannot well go. The cure whereof according to *Ruffus* is thus: Let him blood on both sides of the breast in the accustomed vein, and rowel him under the breast, and twice a day turn the rowels with your hand, to move the humors that they may issue forth, and let him go so roweled the space of fifteen days.

## Of the pain in the Heart called Aniscon, that is to say, contrary to the Heart.

**T**his proceedeth of abundance of rancid blood bred with good feeding and overmuch rest: which blood resorting to the inward parts doth suffocate the heart, and many times causeth swellings to appear before the breast, which will grow upward to the neck, and then it kilth the Horse. The signes: The Horse will hang down his head in the manger, forsaking his meat, and is not able to lift up his head. The cure according to *Martin* is thus: Let him blood on both sides abundantly in the plat veins, and then give him this drink: Take a quart of Malmsie, and put thereunto half a quarten of Sugar, and two ounces of Cinamon, and give it him

him luke-warm, then keep him warm in the stable, keeping him well about the stomach, that the wind offend him no manner of way; and give him warm water with malt always to drink, and give him such meat as he will eat. And if the swelling do appear, then besides letting him blood, strike the swelling in divers places with your steem, that the corruption may go forth: and anoint the plate with warm Hogs grease, and that will either make it to wear away, or else to grow to a head, if it be covered and kept warm.

## Of tired Horses.

**B**ecause we are in hand here with the vital parts, and that when the Horses be tired with overmuch labour, their vital spirits wax feeble, I think it best to speak of them even here, not with long discourfing, as *Vegetius* useth; but briefly to shew you how to refresh the poor Horse, having need thereof, which is done chiefly by giving him rest, warmth and good feeding: as with warm mashes and plenty of provender. And to quicken his spirits, it shall be good to pour a little Oyl and Vinegar into his nostrils, and to give him the drink of Sheeps heads recited before in the Chapter of Consumption of the flesh; yea, and also to bath his legs with this bath: Take of Mallows, of Sage, of each two or three handfuls, and of a Rose-cake; boil these things together, and being boyled, then put untill it a good quantity of Butter, or of Sallet-oyl. Or else make him this charge: Take of Bole Armory, and of Wheat-floure, of each half a pound, and a little Rozen-beare in into powder, and a quart of strong Vinegar, and mingle them together, and cover all his legs therewith; and if it be Summer turn him to graze.

## Of the diseased parts under the Midriff, and first of the Stomach.

**T**he old Authors make mention of many diseases incident to a Horses stomach, as loathing of meat, spewing up his drink, surfering of provender, the hungry evil, and such like, which few of our Farriers have observed: and therefore I will briefly speak of as many as I think necessary to be known; and first of the loathing of meat.

## Of the loathing of meat.

**A** Horse may loath his meat through the intemperature of his stomach, as for that it is too hot or too cold. If his stomach be too hot, then most commonly it will either inflame his mouth and make it to break out in blisters, yea and perhaps cause some Cancer to breed there. The cure of all which things hath been taught before. But if he forsake his meat only for very heat, which you shall perceive by the hotness of his breath and mouth, then cool his stomach by giving him cold water, mingled with a little Vinegar and Oyl to drink, or else give him this drink: Take of Milk and of Wine, of each one pint, and put thereunto three ounces of *Mel Rosatum*, and wash all his mouth with Vinegar and Salt. If his stomach be too cold, then his hair will stare and stand right up, which *Abysnus* and others were wont to cure, by giving the Horse good Wine and Oyl to drink, and some would feed him in Wine Rew, or Sage; some would adde thereunto white Pepper and Myrrhe; some would give him Onyons and Rocket-seed to drink with Wine: Again, there be other some which prescribe the blood of a young Sow with old Wine. *Abysnus* would have the Horse to eat the green blades of Wheat, if the time of the year will serve for it. *Columella* saith, that if a Horse, or any other Beast, do loath his meat, it is good to give him Wine, and the seed of Gith; or else Wine and Stamp Garlick.

## Of casting out his Drink.

**V**egorius saith, that the Horse may have such a Palsie proceeding of cold in his stomach, as he is not able to keep his drink, but many times to cast it out again at his mouth. The remedy whereof is to let him blood in the neck, and to give him Cordial drinks, that is to say, made of hot and comfortable Spices; and also to anoint all his breast, and under his shoulders with hot Oyls, and to purge his head, by blowing up into his nostrils, powders that provoke neezing, such as have been taught you before.

## Of Surfering with glut of Provender.

**T**he glut of provender or other meat not digested, doth cause a Horse to have great pain in his body, so as he is not able to stand on his feet, but lyeth down, and waltzeth as though he had the Bots. The cure whereof according to *Martin*'s experience, is in this sort: Let him blood in the neck, then trot him up and down for the space of an hour; and if he cannot stalle, draw out his yerd, and wash it with a little white Wine luke-warm, and thrust into his yard either a bruised clove of Garlick, or else a little oyl of Camomile, with a wax Candle. If he cannot dung then rake his dung-meat, and give him this Glyster: Take of Mallows two or three handfuls, and boil them in a pottle of fair running water; and when the Mallows be sodden, then strain it, and put thereunto a quarr of soft Butter, and half a pint of Oyl Olive; and having received this Glyster, lead him up and down;



be, Agrimony, Fumitory, Camomile, Wormwood, Licoras, Anise seeds, Smallage, Parsly, Spikenard, Gentian, Succory, Endive, Sprage, Lupines, the virtues whereof you shall learn in the Herbs: but amongst all simples, there is none more praised than the liver of a Woolf beaten into powder, and mingled in any medicine that is made for any disease in the liver.

The cure of an inflammation consisteth in letting blood, and in bathing, or fomenting the fore place with such herbs and Oyls, as may mollifie and disperse humors abroad, wherewith some simples that be astringent would be always mingled: yea, and in all other medicines that be applied to the liver, for any manner of diseases. Simples that mollifie and disperse be these: Linseed, Fenigreek, Camomile, Anise seeds, Melilot; and such like things. Simples astringent be these: Red Rose leaves, Bramble leaves, Wormwood, Plantain, Myrrhe, Mastick, Strax, and such like. Apocistemes are to be ripened and voided: Ulcers must be cleansed, and scoured downward, either by the belly, or by urine: and therefore the use of such simples as provoke urine in such case is necessary. The old Writers of Horse-leech-craft do say, that when a Horse is grieved in his liver, he will forsake his meat, and his body will waste; his mouth will be dry, his tongue rough and harsh: yea, and it will smell, and he will refuse to ly on that side where his grief is. The cure whereof according to *Abysus* is in this sort: Let him drink stamp Treos with Wine allayed with water. He praefeth also an herb much like unto Calamint; called of *Pliny*, *Pulmonia*; or let him drink Savory with Wine and Oyl. I think that Agrimony or Liver-wort is as good as the best of them. *Abysus* would have his body to be chafed with Wine and Oyl mixt together; and to be well littered that he may ly soft: and his provender that should be given him to be steeped first in warm water: and now and then some *Nitrum* to be put into his drink.

#### Of the Consumption in the Liver.

I Believe that no inward member of a Horse doth suffer so much as the lungs and liver, and that not so much by continual, as by unordinate, and untimely travail, labour, and exercise, whereby either the Horses lungs, or his liver do most commonly perish, and is consumed: yea, and sometime both. Of the Consumption of the lungs, we have talked sufficiently before: therefore let us shew you here the causes whereof the Consumption of the liver proceedeth. The Physicians say, that it may come of any humor, but chiefly and most commonly of cholerick matter; shed throughout the substance of the liver, which putrifying by little and little, and leisurely; doth at length corrupt and perish all the substance of the liver, which thing in mans body doth first proceed, as the Physicians say, either by eating corrupt meats, or else by continual drinking of sweet Wines.

But me thinks that the Consumption of a Horses liver, should come by some extreme heat; inflaming the blood, which afterward being purrified, doth corrupt and exulcerate the substance of the liver. For after inflammation, as I said before, cometh Apoptumation, and Exulceration, which is very hard to cure, because the substance of the liver is spongy like unto the lungs. And whilst the liver is so corrupted, there can be no good digestion, for lack whereof the body receiveth no good nutriment; and therefore must needs also languish and consume. The signes according to *Martin* be these:

The Horse will forsake his meat, and will stand stretching himself in length, and never covet to ly down; and his breath will be so strong, as no man can abide it, and he will continually cast yellowish matter at the one nostril; or else at both, according as one or both sides of the liver is corrupted; and on that side that beareth most, he will have under his jaw, even about the midst thereof, a knob or kernel as much as a Walnut, which when *Martin* findeth, he committeth his care to the Crows, taking him to be past cure. But if he were let blood in time, and had fresh drinks given him, as are good to comfort and strengthen the liver, he thinketh that the Horse might be recovered. I never read any medicine for the wasting of the liver; as I remember, but this only diet, which I found in an old English Book: Let him drink for the space of three days no other thing but warm wort; and let him eat no other meat but Oats baked in an Oven; and let him stand meatiels the first night before you give him the wort: But I think it were not amiss to put into the wort that he drinketh every morning some good confecton of powder made of Agrimony, red Rose leaves, *Saccharum*, *Rosaceum*, *Dirachodon*, *Abbas*, *Diesentah*, Licoras, and of the liver of a Wolf, and such other simples as do comfort and strengthen the liver; or else to give him the same things with Goats milk luke-warm.

#### Of the distaste in the Gall.

IN my opinion the gall of a Horse is subject to divers diseases, as well as the gall of a Man: to obstruction, whereof cometh the fulness and emptiness of the bladder, and likewise the flow in the gall. But obstruction may chance two manner of ways: First, when the way, whereby the choler should proceed from the liver unto the bladder of the gall as unto his receptacle, is stopped; and thereby the bladder remaineth empty, whereof may spring divers evil accidents: as vomiting, the Lax or Bloudy flux. Secondly, when the way whereby such choler should issue forth of the bladder of the gall down into the guts is shut up, whereby the bladder is over full and aboundeth with two much choler, which causeth heaviness, suffocation, belching, heat, thirst, and disposition

to angryness. The signes of both kinds of obstruction in the gall is colliciveness and yellowishness of skin infected with the yellow Jaundise. The stone in the gall, which is somewhat blackish, proceedeth of the obstruction of the conduits of the bladder, whereby the choler being long kept in, waxeth dry, and turneth at length to hard gravel or stones, whereof because there is neither signes nor any grievous accident known to the Physicians, I leave to talk any farther thereof, and the rather for that none of mine Authors do make any mention of the gall at all. Notwithstanding to give some light to the learned Farriers; and that they may the better understand the inward parts of a Horse; I thought good to write thus much, thinking it no time lost while I may profit them any way.

#### Of the diseases in the Spleen.

The Spleen, as I have said before in many places, is the receptacle of melancholy, and of the drops of blood, and is subject to the like diseases that the Liver is, that is to say; to swelling, obstruction, hard knobs, and inflammation, for the substance of the Spleen is spongy, and therefore apt to suck in all filth, and to dilate it self; wherefore being full it must needs swell, which will appear in the left side under the short ribs; and such swelling causeth also shortness of breath, and especially when the body doth labour or travel. It is painful also to ly on the right side, because the Spleen being swollen so oppresseth the midriff, and especially when the stomach is full of meat, and the patient hath worse digestion then appetite, and is troubled with much wind, both upward and downward. Moreover the vapour of the humor doth offend the heart, making it faint, and causeth all the body to be heavy and dull; and if such swelling be suffered to go uncured, then if it be a melancholy humor, and abounding over-much, it waxeth every day thicker and thicker, causing obstruction not only in the veins & arteries, which is to be perceived by heaviness and grief on the left side, but also in the Spleen it self; whereas by virtue of the heat it is hardened every day more and more, and so by little and little waxeth to a hard knob, which doth not only occupy all the substance of the Spleen, but also many times all the left side of the womb, and thereby maketh the evil accidents or griefs before recited much more than they were.

Now as touching the inflammation of the Spleen which chanceth very seldom; for so much as every inflammation proceedeth of pure blood, which seldom entereth into the Spleen: I shall not need to make many words, but refer you over to the Chapter of the Liver; for in such case they differ not, but proceeding of like cause, have also like signes, and do require like cure. The old Writers say, that Horses be often grieved with grief in the Spleen, and specially in Summer season with greedy eating of sweet green meats; and they call those Horses *Limpus*; that is to say, Spleenick. The signes whereof (say they) are these, hard swelling on the left side, short breath, often groining, and greedy appetite to meat. The remedy whereof according to *Abysus* is to make a Horse to sweat once a day during a certain time, by riding him, or otherwise travelling him, and to pour into his left nostril every day the juyce of Mirabolans mingled with Wine and Water, amounting in all to the quantity of a pint: But me thinks it would do him more good, if he drank it as *Abysus* would have him to do. *Emmetus* praefeth this drink: Take of Cummin seed and of Honey, of each six ounces, and of *Lasertium* as much as a Bean, of Vinegar a pint; and put all these into three quartes of water, and let it stand so all night, and the next morning give the Horse thereof to drink, being kept over night fasting. *Thomassius* praefeth the decoction of Capers, especially if the bark of the root thereof may be gotten sodden in water to a Syrup. Or else make him a drink of *Calysk*, *Sytrum*, Hore-bound, and Wormwood, sodden in harsh Wine; and he would have the left side to be bathed in warm water, and to be hard rubbed. And if all this will not help; then to give him the tree, which *Abysus* doth not allow, saying the Spleen lyeth so, as it cannot easily be fixed, to do him any good. But for so much as the Liver and Spleen are members much obstructed in the ingendering and separating of humors, many evil accidents and griefs do take their first beginning of them, as the Jaundise, called in a Horse, the yellow; urines of body; and Castings on of the flesh, without any apparent cause why, which the Physicians call *Atrophia*; also evil habit of the body, called of them *Cachexia*, and the Dropsie. But first we will speak of the Jaundise or Yellow.

#### Of the Yellow.

The Physicians in a mans body do make two kinds of Jaundise; that is to say, the Yellow, proceeding of choler dispersed throughout the whole body; and dying the skin yellow; and the Black proceeding of melancholy, dispersed likewise throughout the whole body, and making all the skin black. And as the yellow Jaundise cometh for the most part, either by obstruction of stopping of the conduits belonging to the bladder of the gall, which (as I said before) is the receptacle of choler; or by some inflammation of the liver, whereby the blood is converted into choler, and so spreadeth throughout the body; even so the black Jaundise cometh by mean of some obstruction in the Liver vein, that goeth to the Spleen, by stopping the Spleen vein, or by some inflammation of the drops of the blood from the Liver, whereby they abound too much; or else for that the Spleen is already full of drops; and so it reacheth them back again into the veins. But as for the black Jaundise; they have not been observed to be in Horses as in Men; any of our Farriers in these days that



that I can learn. And yet the old Writers of Horse-leech-craft, do seem to make two kinds of Jaundise called of them *Cholera*, that is to say, the dry choler, and also the moist choler. The signs of the dry choler, as *Abstrus* saith, is great heat in the body, and collikeness of the belly, wherof it is said to be dry. Moreover, the Horse will not covet to ly down, because he is so pained in his body, and his mouth will be hot and dry.

It cometh, as he saith, by obstruction of the conduit, whereby the choler should resort into the bladder of the gall, and by obstruction also of the urine vessels, so as he cannot saile. The cure according to his experience, is to give him a Glyster made of Oyl, Water and *Nitrum*, and to give him no provender, before that you have raked his fundament, and to pour the decoction of Mal-lows mingled with sweet Wine into his nostrils, and let his meat be grals, or else sweet Hay sprinkled with Nitre and Water; and he must rest from labour, and be often rubbed. *Hieracles* would have him to drink the decoction of wilde Coleworts foddren in Wine. Again of the moist choler of Jaundise, these are the signes: The Horses eyes will look yellow, and his nostrils will open wide; his ears and his flanks will sweat, and his stale will be yellow and cholericke; and he will grone when he lyeth down; which disease the said *Abstrus* was wont to heal, as he saith, by giving the Horse a drink made of Thyme and Cumin, of each like quantity stamp together, and mingled with Wine, Honey, and Water, and also by letting him blood in the pasterns. This last disease seemeth to differ nothing at all from that which our Farriers call the Yellows. The signes whereof, according to *Martin*, be these: The Horse will be faint, and sweat as he standeth in the stable, and forsake his meat; and his eyes, and the inside of his lips and all his mouth within will be yellow. The cure whereof according to him is in this sort: Let him blood in the neck-vein, a good quantity, and then give him this drink: Take of white Wine, of Ale a quart, and put thereunto of Saffron, Turmeric, of each half an ounce, and the juice that is wrung out of a handful of Celandine, and being luke-warm, give it the Horse to drink, and keep him warm the space of three or four days, giving him warm water with a little Bran in it.

#### Of the Yellows.

Markham.

The Yellows is a general disease in Horses, and differ nothing from the yellow Jaundise in men: It is mortal, and many Horses die thereof: the signes to know it is thus; pull down the lids of the Horses eyes, and the white of the eye will be yellow, the inside of his lips will be yellow, and gums, the cure followeth: First, let him blood in the palat of his mouth, that he may lick up the same, then give him this drink: Take of strong Ale a quart, of the green ordure of Geese strained three or four spoonfulls, of the juice of Celandine as much, of Saffron half an ounce, mix these together, and being warm, give it the Horse to drink.

#### Of the evil habit of the Body, and of the Dropisie.

Blundevile.

As touching the driness and Consumption of the flesh, without any apparent cause why, called of the Physicians as I said before *Atrophia*; I know not what to say more then I have already before in the Chapter of Consumption of the flesh, and therefore resort thither. And as for the evil habit of the body, which is to be evil coloured, heavy, dull, and of no force, strength, nor liveliness, cometh not for lack of nutriment, but for lack of good nutriment, for that the blood is corrupted with flegm, choler, or melancholy, proceeding either from the Spleen, or else through weakness of the stomach or liver, causing evil digestion, or it may come by foul feeding; yea, and also for lack of moderate exercise. The Evil habit of the body, is next couglen to the Dropisie, wherof though our Farriers have had no experience, yet because mine old Authors writing of Horse-leech-craft do speak much thereof: I think it good here briefly to shew you their experience therein, that is to say, how to know it, and also how to cure it. But sith none of them do shew the cause, wherof it proceeds; I think it meet first therefore to declare unto you the causes thereof, according to the doctrine of the learned Physicians, which in mans body do make three kinds of Dropisies, calling the first *Anasarca*, the second *Ascites*, and the third *Timpany*. *Anasarca*, is an universal swelling of the body through the abundance of the water, lying betwixt the skin and the flesh, and differeth not from the disease last mentioned, called *Cachexia*, that is to say, Evil habit of the blood, saving that the body is more swollen in this then in *Cachexia*, albeit they proceed both of like causes as of coldness and weakness of the liver, or by means that the heart, spleen, stomach, and other members serving to digestion, be grieved or diseased. *Ascites* is a swelling in the covering of the belly, called of the Physicians, *Abdomen*, comprehending both the skin, the fat, eight muscles, and the film or parricle called *Peritonium*, through the abundance of some watthy humor entered into the same, which before the causes before aledged, proceedeth most chiefly by means that some of the vessels within be broken or rather cracked, out of the which, though the blood being somewhat gross cannot issue forth, yet the watthy humor being subtil, may run out into the belly, like water distilling through a cracked pot.

*Timpany*, called of us commonly the Timpany, is a swelling of the aforesaid covering of the belly, through the abundance of wind entered into the same, which wind is ingendred of crudity and evil digestion, and whilst it aboundeth in the stomach, or other intrails finding no issue out, it breaketh in violently through the small conduits among the parricles of the aforesaid covering

not without great pain to the patient, and so by tossing to and fro, windeth at length into the space of the covering it self. But surely such wind cannot be altogether void of moisture.

Notwithstanding, the body swelleth not so much with this kind of Dropisie as with the other kind called *Ascites*. The signes of the Dropisie is shortness of breath, swelling of the body, evil colour, lothing of meat, and great desire to drink, especially in the Dropisie called *Ascites*; in which also the belly will found like a bottle half full of water: but in the Timpany it will found like a Tabor. But now though mine Authors make not so many kinds of Dropisies, yet they say all generally, that a Horse is much subject to the Dropisie. The signes according to *Abstrus* and *Hieracles*, be these: His belly, legs, and stones, will be swollen; but his back, buttocks, and flanks, will be dried and shrunk up to the very bones.

Moreover the veins of his face and temples, and also the veins under his tongue will be so hidden, as you cannot see them; and if you thrust your finger hard against his body, you shall leave the print thereof behinde, for the flesh lacking natural heat will not return again to his place, and when the Horse lyeth down he spreadeth himself abroad, not being able to lie round together on his belly; and the hair of his back by rubbing will fall away. *Pelagius* in shewing the signes of the Dropisie, not much differing from the Physicians first recited, seemeth to make two kinds thereof, calling the one the Timpany, which for difference sake may be called in English the Winde Dropisie, and the other the Water Dropisie. Notwithstanding both have one cure, so far as I can perceive, which is in this sort: Let him be warm covered, and walked a good while together in the Sun to provoke sweat, and let all his body be well and often rubbed along the hair, and let him feed upon Coleworts, Smallage, and Elming boughs, and on all other things that may loosen the belly, or provoke urine; and let his common meat be grals if it may be gotten, if not, then Hay sprinkled with Water and *Nitrum*. It is good also to give him a kinde of Pulse called Cich, steeped a day and a night in water, and then taken out, and laid so as the water may drop away from it. *Pelagius* would have him to drink Partly stamp with Wine, or the root of the herb called in Latine, *Panax*, with Wine. But if the swelling of the belly will not decrease for all this, then slit a little hole under his belly a handfull behinde the navel, and put into that hole a hollow reed or some other pipe, that the water or wind may go out, not all at once, but by little and little at divers times; and beware that you make not the hole over wide, lest the gall of the belly fall down thereunto; and when all the water is clean run out, then heal up the wound as you do all other wounds, and let the Horse drink as little as is possible.

#### Of the Evil habit of the Stomach.

If your Horse either by inward sickness, or by present surfeit, grow to a loath of his meat, or by weakness of his stomach cast up his meat and drink; this shall be the cure for the same; First, in all the drink he drinks, let him have the powder of Hot Spices; as namely, of Ginger, Anise seeds, Licoras, Cinamon, and Pepper; then blow up into his nostrils the powder of Tobacco to occasion him to sneeze, instantly after he hath eaten any meat, for an hour together after. let one stand by him, and hold at his nose a piece of fowre leaven steep in Vinegar, then anoint all his breast over with the Oyl of Ginnuper and Pepper mixt together.

#### Of the diseases of the Guts of a Horse, and first of the Colick.

The guts of a Horse may be diseased with divers griefs, as with the Colick, with Costiveness, Blundevile. with the Lax, with the Bloody Flux and Worms. The Colick is a grievous pain in the great gut, called of the Physicians *Colica*, wherof this disease taketh his name, which gut, because it is very large and ample, and full of corners, it is apt to receive divers matters, and so becometh subject to divers griefs. For sometime it is tormented with the abundance of gross humors gotten betwixt the parricle of the said gut, and sometime with wind having no issue out, sometime with inflammation, and sometime with sharp fretting humors. But so far as I can learn; a Horse is most commonly troubled with the Colick that cometh of winde, and therefore our Farriers do term it the winde Colick. The signes whereof be these: The Horse will forsake his meat, and lie down and wallow and walter upon the ground, and standing on his feet he will stamp for very pain with his fore-feet, and strike on his belly with his hinder foot, and look often towards his belly, which also towards his flanks will swell, and seem greater to the eye then it was wont to be. The cure whereof according to *Martin*, is in this sort: Take a quart of Malmise, of Cloves, Pepper, Cinamon, of each half an ounce, of Sugar half a quarter, and give it the Horse luke-warm, and anoint his flanks with Oyl of Bay, and then bridle him and trot him immediately up and down the space of an hour, until he dung, and if he will not dung, then rake him; and if need be provoke him to dung, by putting into his fundament an Onyon piled and jagged with a knife cross-wise, so as the juice thereof may tickle his fundament; and for the space of three or four days let him drink no cold water, and let him be kept warm. *Russus* was wont to use this kinde of cure: Take a good big reed a span long or more, and being anointed with Oyl, thrust it into the Horses fundament, fasting the outward end thereof unto his tail, so as it cannot slip out, and then having







*Of the mastering of the world*

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### Of the shedding of Seed.

**Blundevile.**

This disease is called by the Physicians *Gouttes*, which may come sometime through the heat of the sun, and rankness of feed, and sometime by the weakness of the stomachs and feed venting the blood into the feed until it be digested and thickened. If *God* will, that this disease will make the Horse very tame and weak, and especially in Summer season. For cause whereof, the said *Worms* will invade the Horse to creep down into his cold water, even up to the belly, so as his stomach may be covered in water; and then his fundament being first bathed with warm water and Oyl, he would have you to thrust in your hand and arm even to the very bladder, and so to rub and draw the same; and the parts thereabout, which be the feed vessels: that done to cover him warm that he take no cold, and every day he would have you to give the Horse Hogs dung to drink with red Wine until he be whole. For my part, if I thought it ~~use of water~~ as is afore said, which I would judge by the wateriness of the feed and unfitness of the Horse, would give him red Wine to drink, and put therein a little *Acorn*, the juice of *Plantain*, and a little *Mallick*; and bath his back with red Wine and Oyl of *Rose* mingled together.

*of the Felling of the Yard.*

**I**T cometh, as I take it, through the weakness of the member, by means of some resolution in the sinews and sinews lying the same, caused at the first (perhaps) by some great Aching or Strain of the back. It may come also by weariness and tiring. And some say whereof *Aspirus* was wont to wash the yard with salt water from the Sea, that may be gotten; and if that with water and salt; and that prevailed not, he would salt the prick the outward skin of the yard with a sharp needle; he not too deep, and then wash all the prick with strong Vinegar, and that did make the Horse, as he said, to draw up his yard again immediately; yea, and this also will remedy the falling out of the humours. *Pelegius* would have you to put into the pincle of his yard Honey and Salt boiled together, and made liquid, or else a quicklime, or a grain of *Terribiacule*, or a dove of Garlicke clean pilled, and formerly bruised; and also to pour on his back Oyl, *Wine*, *Mizze* made warm and mingled together. But *Martin* experience is in this sort: First, wash the yard with warm white Wine, and then anoint it with Oyl of Roses and Honey mingled together, and put it up into the Sheath, and make him a good piece of Canvas to keep it still up; and dress it thus every day once until it be whole. And in any case let his back be kept warm, either with a double cloth, or else with a charge made of Boile *Armony*, Eggs, Wheat-flower, *Sanguin Draconis*, Turpentine, and Vinegar; or else lay on a wet flax which being covered with another dry cloth will keep his back very warm.

*Of the swelling of the Cod and Stones.*

**A** *Egyptin* saith, that the inflammation and swelling of the cod and stones, cometh by means of hotte wound, or by the stinging of some serpent, or by fighting one Horse with another. For remedy whereof, he was wont to bathe the said water wherein hath been loddend the root of wild Cucumber and Salt, and then to anoint it with an Ointment made of *Cervus Oyl*, Coats greisse, and the white of an Egge. Some againe would have the cod to be bathed in warm Water, *Millin*, and *Vinegar* together, and also to be anointed with an Ointment made of Chalk, or of Potters earth, *Ondung*, Cumin, Water, and Vinegar, or else to be anointed with the juyce of the herb *Vincetoxic*, called of some Night-shade, or with the juyce of Hemlock growing on dunghills i' ye, and this to be bloud in the flanks. But *Martin* saith, that the swelling of the cod cometh for the most part after some sickness or surfeiting with cold; and then it is a signe of amendment. The cure according to his experience is in this sort. First let him bloud on both sides the flank veins. Then take a Oyl of *Roses*, of Vinegar of each half a pinte, and half a quarter of Bole Armony beaten to powder. mingle them together in a cruse, and being like warm, anoint the cods therewith with two or three feathers bound together, and the next day ride him into the water, so as his cods may be within the water, giving him two or three tuns therein, and so returne said and softly to the stable, and when he is drye anoint him againe as before, continuing thus to do every day once until they be whole. The said *Martin* saith also, the cods may be cured by means of some hurt or evil buttons reforming into the cods, and then he would have you cover the cods with a charge made of Bole Armony and Vinegar wrought together, renewing it every day once untill the swelling go away, or that it break off by itself, and if it break, then tent it with *Mafuratum*, and make him a breech of Canvas to keep it in, renewing the tent every day once untill it be whole.

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But forasmuch as some of these authors, *Marston*, nor any other writer in these dayses that I know, have intermingled with my purpose of binding, but only with that wherein the girth falleth down one side, call leaving all the rest asappert, will only write of this; and that according to *Marston's* experience, which I suppose you discern not much from the precepts of the old writers: But firstly you shall understand, that the Girth-buckle, and Flank-buckle, both proceed both of one waye, that is to say, by means that the skin, called *the Pastern*, is either fore strained, or else broken, either by some stripe of another Horse, or else by some dustin in keeping over a hedge; which, or paine, or otherwise; yea, and many times in passing a career, through the carelessness of the Rider, hopping the Horse suddenly without giving warning, whereby the Horse is forced to cast his hinder legs abroad, and so straineth or burtheneth the skin aforesaid, by means whereof the girth falleth down into the side. The signe be these; The Horse will forsake his moor, and stand shoving and teasing at the side on that side that he is hurt; and on that side if you reach with your hand between the Horse and the side in the feeling, whereas on the other side you shall find no such thing. The cure according to *Marston's* thus; Bring the Horse into some house or place that hath over head a strong balk or beam going overhead, and brew that place thick with straw; then put on four paterines with four rings on his sides, and then fasten the one end of a long vine or one of those rings, then thread all the other rings with the loofe end of the rope, and to draw all his four feet together, and call him on the straw, that done, call the rope over the baulk, and hoise the Horse so as he may lie flat on his back, with his head upward without struggling. Then bathe his sides well with warm Water and Butter mixed in together, and the Aches being somewhat eased, may well be laid a little cloth up from the body with both your hands being closed by the fingers laid together, and holding the fingers in your hands with small motion, work down the skin into the body of the Horse, by striking it downward continually with your two thumbs, one labouring immediately after another, by which you perceive that the skin of the Horse to be so small as the other, and having so thoroughly; that is to say, returned the skin into its right place; take a lift of two fingers broad, and discorporate; that is to say, returned the skin into its place both together with the same so high as may be; not over high, but so far as you may; put a cloth between; that done, take the Horse quietly down, and lead him fast and comfortably to his stall, where he must stand warm; and not be stirred for the space of three weekes. But for yett see the remedy after his discording to unloosen the lill and to take it away; and as well at other times; so as every once or twice afeety, to take a daff or two of cold water up into his eock, and then will he be able to drink up his flones, and thereby restrain the gut from falling down, and at the first time be cured; it were not amisse to geld the horse on that side away, so that he never be troubled again on that side. But let him not eat much nor drink much. And thus much I have written.



## Of the wrinching of the Shoulder.

His cometh sometime by a fall, and sometime by turning too suddenly in some uneven ground, or by rash running out of some door, or by some stripe of another Horse, or by some sudden stop in passing a Career: you shall perceive it in his going, by trailing his legs upon the ground, so close unto himself as he can possibly. The cure, according to *Martin*, is thus: Let him blood the quantity of three pintes, on the breast in the palat-vein, receiving the blood in a pot; and thereunto put first a quart of strong Vinegar, and half a dozen broken Egges, shels and all, and so much Wheat-flower as will thicken all that liquor. That done, put thereunto Bole Armony beaten into fine powder one pound, *Sanguis Draconis* two ounces, and mingle them all together, so as the flower may not be perceived, and if it be too stiffe, you may make it more liquid or soft, with a little Vinegar. Then with your hand daub all the shoulder from the mane downward, and betwixt the fore-bowels, all against the hair, and let not the Horse depart out of that place, untill the charge be surely fastned unto the skin.

That done, carry him into the stable, and tie him up to the rack, and suffer him not to lie down all that day, and give him a little meat, dieting him moderately the space of fifteen days: during which time he may not stir out of his place, but only lie down, and every day once refresh the shoulder point with this charge, laying still new upon the old, and at the fifteen days end, lead him abroad to see how he goeth, and if he be somewhat amended, then let him rest without travelling, the space of one month; and that shall bring his shoulder to perfection. But if he be never the better for this that is done, then it shall be needful to rowel him with a leather rowel upon the shoulder-point, and to keep him rowelled the space of fifteen days, renewing the rowel, and cleaning the wound every other day; and then walk him up and down fair and softly, and turn him always on the contrary side to the fore; and when he goeth upright, pull out the rowel and heal the wound with a tent of flax dipt in Turpentine, and Hogs greafe molten together. And if all this will not serve, then it shall be needful to draw him checker-wife with a hot iron over all the Shoulder-point; and also make him to draw in a plough every day two hours at the least, to settle his joynts for the space of three weeks or a month; and if anything will help him, these two last remedies will help him, and make him to go upright again.

## Of Splaiting in the Shoulder.

His cometh by some dangerous sliding or slipping, whereby the shoulder parteth from the breast, and so leaves an open rift, not in the skin, but in the flesh and film next under the skin, and so he halteth and is not able to go; you shall perceive it by trailing his leg after him in his going. The cure according to *Martin* is thus: First put a pair of straight patterns on his fore-feet, keeping him still in the stable without disquieting him: Then take of *Dialthea* one pound, of Sallet Oyl one pinte, of Oyl-de-bays half a pound, of fresh Butter half a pound; melt all these things together in a Pipkin, and anoint the grieved place therewith, and also round about the inside of the shoulder, and within two or three days after, both that place and all the shoulder besides will swell. Then either prick him with a lancet or steam, in all the swelling places, or else with some other sharp hot Iron, the head whereof would be an inch long, to the intent that the corruption may run out, and use to anoint it still with the same Ointment. But if you see that it will not go away, but swell still, and gather to a head, then lance it where the swelling doth gather most, and is soft under the finger, and then tent it with flax dipt in this Ointment: Take of Turpentine and of Hogs greafe, of each two ounces, and melt them together, renewing the tent twice a day untill it be whole.

## Of the Shoulder pight.

Blundevile.

This is when the shoulder point or pitch of the shoulder is displaced, which grief is called of the *Italians*, *Splatto*; and it cometh by reason of some great fall forward, rush or strain. The signes be these: That shoulder-point will stick out further then his fellow, and the Horse will halt right down. The cure according to *Martin* is thus: First make him to swim in a deep water upon down a dozen turns, and that shall make the joynt to return into his place. Then make two rough pins of Ashen wood as much as your little finger: sharp at the points, each one five inches long; cut done, slit the skin an inch above the point, and an inch beneath the point of the shoulder, and thrust in one of the pins from above downward, so as both ends may equally stick without the skin. And if the pin of wood will not easily pass through, you may make it way thick with an Iron pin: That done, make other two holes close to the first holes, so as the other pin may cross the first pin right in the midst with a right cross, and the first pin would be somewhat flat in the midst, to the intent that the other being round, may pass the horse without hurt, and close the joints together. Then take a piece of a little line, somewhat bigger then a whip-cord, and at one end make a loopy, which being put over one of the pins ends, wind the end of the line good and straight about the pins ends, so as it may lie betwixt the pins ends and the skin, and fasten the last end with a pack-needle and pack-thread unto the rest of the cord, so as it may not slip: and to do well, both the pricks and the cord would be first anointed with a little Hogs greafe. Then bring him into the stable, and let him rest

the space of nine days, but let him lie down as little as may be, and put on a pattern on the fore leg, so as it may be bound with a cord unto the foot of the manger, to keep that leg always whilst he standeth in the stable more forward then the other. And at the nine days end take out the pricks, and anoint the sore places with a little *Dialthea*, or with Hogs greafe, and then turn him out to graze.

## Of the swelling of the Fore-legs after great labor.

Great labour and heat causeth humors, to resort down into the legs making them swell. The cure whereof according to *Martin* is thus: Bathe them with buttered Beer, or else with this bath here following: Take of Mallows three handfulls, a Rose cake, Sage one handfull: boil them together in a sufficient quantity of water, and when the Mallows be soft, put in half a pound of Butter, and half a pinte of Sallet Oyl, and then being somewhat warm, wash the swelling therewith every day once, the space of three or four days. And if the swelling will not go away with this; then take Wine lees, and Cumin, and boil them together, and put thereunto a little Wheat-flower, and charge all the swelling therewith, and walk him often: and if it will not serve, then take up the great vein above the knee on the inside, suffering him not to bleed from above, but all from beneath.

## Of the Foundering in the Fore-legs.

The cause of this grief is declared before in the Chapter of foundering in the body, whereas I shewed you, that if a Horse be foundered in the body, the humors will immediately resort down into his legs, as *Martin* saith, within the space of 24 hours, and then the Horse will go crouching all upon the hinder-legs, his fore-legs being so stiffe, as he is not able to bow them. The cure whereof, according to *Martin*, is in this sort: Carry each leg immediately one handfull above the knee, with a lift good and hard, and then walk him or chafe him, and so put him in a heat, and being somewhat warmed, let him blood in both the breast veins, reserving the blood to make a charge with all in this manner:

Take of that blood two quarts, and of Wheat-flower half a peck, and six Egges, shels and all, of Bole Armony half a pound, of *Sanguis Draconis* half a quart, and a quart of strong Vinegar; mingle them all together, and charge all the shoulders, breasts, back, loyns, and fore-legs therewith, and then walk him upon some hard ground, suffering him not to stand still; and when the charge is dry, refresh it again. And having walked him three or four hours together, lead him into the stable, and give him a little warm water with ground Maik in it, and then a little Hay and provender, and then walk him again, either in the house, or else abroad, and continue thus the space of four days: and when all the charge is spent, cover him well with a hoisting-cloth, and let him both stand and lie warm, and eat but little meat during the four days. But if you see that at four days end he mendeth not a whit, then it is a sign that the humor lies in the foot, for the which you must search with your Butters paring all the soles of the fore-feet to thin as you shall see the water issue through the sole. That done, with your Butters, let him blood at both the toes, and let him bleed well. Then stop the vein with a little Hogs greafe, and then rack on the shoes, and Turpentine molten together, and laid upon a little flax; and cram the place where you did let him blood hard with Tow to the intent it may be surely stopp'd. Then fill both his feet with Hogs greafe, and brayd together in a stopping pan, so hot as is possible. And upon the stopping clap a piece of leather, or else two splents to keep the stopping. And immediately after this, take two Egges, beat them in a dish, and put thereto Bole Armony, and Beap-Bowre so much as will thicken the same; and mingle them well together, and make thereof two plaisters, such as may close each foot round about, somewhat above the cronet, and binde it fast with a lift or roller, that it may not fall away, nor be removed for the space of three days, but let the sole be cleaned, and new stopped every day once, and the cronets to be resopped every two days, continuing so, to do until it be whole. Dating which time let him rest unwalked, for fear of loosening his hoofs. But if you see that he begin to amend, you may walk him fain and softly once a day upon some soft ground, to exercise his legs and feet; and let him not eat much, nor drink cold water. But if this foundering break out above the hoof, which you shall perceive by the loosness of the coffin, above by the cronet; then when you pare the sole, you must take all the fore-part of the sole clean away, leaving the heels whole, to the intent the humors may have the freer passage downward, and then stop him, and dress him about the cronet as is before said.

## Of Foundring.

Of all other sorances, foundering is soonest got, and hardiest cured: yet if it may be perceived in other twenty and four hours; and taken in hand by this means hereafter prescribed, it shall be cured in other twenty and four hours; notwithstanding the same, again hath cured a Horse that hath been foundered a year and more, but then it was longer in bringing it to pass. Foundering cometh when a Horse is heated, being in his greafe and very fat, and taketh thereto a sudden cold whilst he stinketh down into his legs, and taketh away the use and feeling thereof. The sign to know it is, the Horse

Markham.



Horse cannot go, but will stand crippling with all his four legs together; if you offer to turn him, he will couch his buttocks to the ground, and some Horses have I seen sit on their buttocks to feed.

The cure is thus: Let him blood of his two breast veins, of his two shackle veins, and of his two veins above the cronets of his hinder hoofs; if the veins will bleed, take from them three pintes at least; if they will not bleed, then open his neck vein, and take so much from thence. Save the blood, and let one stand by and stir it as he bleeds; lest it grow into lumps; when he hath done bleeding, and take as much Wheat flower as will thicken the blood, the whites of twenty Egges, and three or four yolks; then take a good quantity of *Bolarmineack*, and a pinte of strong Vinegar, incorporate all these well together, and withal charge his back, neck, head, and ears; then take two long rags of cloth and dip in the same charge, and withal garter him so strait as may be above both his knees of his forelegs; then let his keeper take him out to some stony cause, or high-way paved with stone, or and there one following him with a cudgel, let him trot up and down for the space of an hour, or two, or more: that done, set him up and give him some meat; and for his drink, let him have a warm mash: some three or four hours after this, take off his garters, and set him in some pond of water up to the mid-side, and let him stand for two hours, then take him out and set him up; the next day pull off his shooes, and pare his feet very thin, and let him blood both of his heels and toes; then set on his shooes again, and top them with Hogs greafe and bran boiling hot, and split them up, and so turn him out to run, and he shall be sound.

*of the Splent as well in the inside or outside of the knee, as either where in the Legs.*

Blondeville.

This sorance to any mans feeling, is a very gristle, sometime as big as a Walnut, and sometime no more than a Hazel-nut, which is called of the *Italians*, *Spinele*, and it cometh as *Laurentius Russinus* saith, by travelling the Horse too young, or by oppressing him with heave burthens offending his tender sinews, and so causeth him to halt: It is easie to know, because it is apparent to the eye, and if you pinch it with your thumb and finger, the Horse will shrink up his leg.

The cure whereof, according to *Martin*, is in this sort: Wash it well in warm water, and shave off the hair, and lightly scarifie all the fore places with the point of a razor, so as the blood may issue forth. Then take of Cantharides halfe a spoonfull, and of *Euforbium* as much, beaten into fine powder, and mingle them together with a spoonfull of Oyl-de-bay, and then mele them in a little pan, stirring them well together, so as that they may not boil over, and being so boiled hot, take two or three feathers, and anoint all the fore place therewith. That done, let not the Horse stir from the place where you do dresse him for one hour after, to the intent he shake not off the ointment. Then carry him fair and softly into the stable, and tie him as he may not reach with his head beneath the manger, for otherwise he will covet to bite away the smarting and pricking medicine, which if it should conch his lips, would quickly fetch off the skin. And also let him stand without litter all that day and night. The next day anoint the fore place with fresh butter, continuing so to do every day once for the space of nine dayes, for this shall allay the heat of the medicine, and cause both that, and the crust to fall away of it self, and therewith either clean take away the splent, or at least remove it out of the knee into the leg, and so much diminish it, as the Horse shall go right up, and halt no more through occasion thereof. *Laurentius Russinus* would have the splent to be cured by firing it long with fire and overthwart. I have seen the splent to be clean taken away thus: first having clipped away the hair growing upon the hard place, you must beat it with a good big stick of Hazel almost a foot long, in which stick somewhat distant from the one end thereof would be set fast a sharp prick of a little bit of steel, to prick the fore place therewith, once or twice to make the blood issue out, never leaving to beat it first softly, and then harder and harder until it waxeth soft in every place to the feeling, and to thrust out the blood; partly with the stick, leaning on it with both your hands, and partly with your thumbs: that done, wind about the fore place with a piece of double red woollen cloth, holding it so as it may lie close thereto; then fear it upon the cloth with the flat side of your searing iron, made hot, and not red-hot, but so as it may not burn through the cloth; that done, take away the cloth, and lay upon the fore a piece of Shoemakers wax, made like a little cake, so broad as is the fore place, and then fear that into his Legs with your searing iron, until the wax be thoroughly molten, dried, and sunken into the fore: that done, fear another piece of wax in like manner into the fore, until it be dried up, and then you may travel your Horse immediately upon it if you will, for he will not halt no more.

*of the Splent.*

Markham.

A Splent is a sorance of the least moment, unless it be on the knee, or else a through Splent, both which cannot be cured. A Splent is a spungy hard gristle or bone, growing fast on the inside of the shin-bone of a Horse, where a little making stark the sinews compels a Horse somewhat to stumble. The cures are divers, and thus they be; If the Splent be young, tender, and but new

in breeding, then call the Horse, and take a spoonfull of that Oyl called *Petroleum*, and with that Oyl rub the Splent till you make it soft; then take a steam, such as you let a Horse blood withal, and strike the Splent in two or three places, then with your two thumbs thrust it hard, and you shall see crust matter and blood come out, which is the very Splent; then set him up and let him rest, or run at grass for a week or more. Others for a young Splent do thus: Take a Hazel stick and cut it square, and therewithal beat the Splent till it be soft, then take a blew cloth and lay upon the Splent, and take a Taylors prestling Iron made hot and rub it up and down upon the cloth over the Splent, and it shall take it clean away. But if the Splent be old and great, and grown to the perfection of hardness, then you must call the Horse, and with a sharp knife slit down the Splent; then take *Cantharides* and *Euforbium*, of each like quantity, and boyl them in Oyl-de-bay, and with that fill up the slit, and renew it for three dayes together, then take it away and anoint the place with Oyl-de-bay, Oyl of Roses or Tar; until it be whole.

*of a Malander.*

A Malander is a kinde of Scab growing in the forme of lines, or strokes, overthwart the bent of the knee, and hath long hairs with stubborn roots, like the bristles of a Bore, which corrupteth and cankereth the flesh, like the roots of a childes scabbed head: and if it be great, it will make the Horse to go stiffe at the setting forth, and also to halt. This discale proceedeth sometime of corrupt blood, but most commonly for lack of clean keeping, and good rubbing. The cure, according to *Martin*, is thus: First wash it well with warm water, then shave both hair and scab clean away, leaving nothing but the bare flesh, whereunto lay this Plaster: Take a spoonfull of Soper, and as much of Lime, mingle them together, that it may be like paste, and spread as much on a clout as will cover the sore, and binde it fast on with a lilt, renewing it every day once the space of two or three dayes, and at the three dayes end, take away the Plaster and anoint the sore with Oyl of Roses made luke-warm, and that shall fetch away the crust-scure, bred by means of the Plaster, which being taken away, wash the fore place well every day once with his own stale, or else with mane urine, and then immediately srow upon it the powder of burnt Oylerhels, continuing thus to do every day once until it be whole.

*Another of the Malander.*

A Malander is a peevish sorance, and cometh of ill keeping, it is on the fore-legs, just on the inside, at the bending of the knee, it will make a Horse go stark, and stumble much. The cure is in this sort: Call the Horse, and with some instrument pluck off the dry scab that will stick thereon, and rub it till it bleed, then take and bind it thereto for three dayes, in which space you shall see a white asker on the fore, then take that off and anoint it with Oyl of Roses or fresh Butter until it be thoroughly cured.

*Of an upper Attains or over-reach upon the back sinew of the shanke, somewhat above the joynt.*

The *Italians* call this sorance *Atinda*, which is a painful swelling of the master sinew, by means that the Horse doth sometimes over-reach, and strike that sinew with the toe of his hinder-foot, which causeth him to halt. The signes be apparent by the swelling of the place, and by the Horses halting. The cure, according to *Martin*, is thus: Wash the place with warm water, and shave all the hair so far as the swelling goeth, and scarifie every part of the fore place lightly with the point of a Razor, that the blood may issue forth. Then take of *Cantharides* and of *Euforbium*, of each half an ounce, mingle them together with half a quart of Soper, and with a lilt spread some of this Ointment over all the fore, suffering him to rest there as you dresse him for one half hour after, and then you may carry him into the stable, and there let him stand without litter, and tyed as hath been said before in the Chapter of the Spleen, and the next day dresse him with the same Ointment once again, even as you did before. And the third day anoint the place with fresh Butter, continuing so to do the space of nine dayes, and at the nine dayes end, make him this bath: Take of Mallows three handfulls, a Rose-cake, of Sage a handfull, boyl them together in a sufficient quantity of water. And when the Mallows be soft, put in half a pound of Butter, and half a pinte of Sallet Oyle; and then being somewhat warm, wash the fore place therewith every day once, the space of three or four dayes.

Ee

of



## Of a Nether taint.

Blundevile.

**T**His is a little bladder full of jelly, much like unto a Wind-gal, not apparent to the eye, but to the feeling, growing in the middle of the pastern, somewhat above the frush. It cometh by a strain, or else by some wrench, or by any other over-reach, and maketh the Horse to halt. The signes be these; The neather-joint toward the fetter-lock will be hot in feeling, and somewhat swollen. The cure, according to *Martin*, is in this sort; Tie him above the joint with a flax linst somewhat hard, and that will cause the bladder to appear to the sight with a sharp pointed knife, and thrust out the jelly. That done, lay unto it the white of an Egge, and a little Salt beaten together, and laid upon flax or tow, and bind it fast unto the sore, renewing it once a day the space of four or five dayes, during which time let him rest, and then you may boldly labour him.

## Of an Attaint.

Markham.

**A**N Attaint is a grief that cometh by an over-reach, as clapping one leg upon another, or by some other Horses treading upon his heels. The cure is; Take a sharp knife and cut out the over-reach, that is, if it be never so deep like a hole, cut it plain and smooth, how broad so ever you make it, then wash it with Beer and Salt, and lay to it Hogs grease, Wax, Turpentine, and Rosen, of each like quantity, boyled and mingled together, and this will in few dayes heal him, be it never so fore.

## Of an over-reach upon the heel.

**T**His is a cut, so as the skin hangs down at the heel, made with the toe of the hinder foot, and is apparent to the eye, and it will cause the Horse somewhat to halt. The cure whereof, according to *Martin*, is thus; Cut away the skin that hangeth down, and bind a little flax dipt in the white of an Egge mingled with a little Bole-army, renewing it every day once the space of three or four dayes, and that will heal it.

## Of false quarters.

**T**His is a rift sometime in the outside, but most commonly in the inside of the hoof, because the inside is ever the weaker part, which sides are commonly called quarters, and thereof this forance taketh his name, and is called a false quarter; that is to say, a cracked or unsound quarter, which name indeed is borrowed of the *Italians*, calling it in their tongue, *Falso quarter*. It cometh by evil shoeing, and partly by evil paring. The signes be these: The Horse will for the most part halt, and the rift will bleed, and is apparent to the eye. The cure, according to *Martin*, is thus; If the Horse halt, then pull off the shoe, and cut so much away on that side of the shoe where the grief is, as the shoe being immediately put on again, the rift may be uncovered. Then open the rift with a Rosenet or drawer, and fill the rift with a roil of Toe dipt in Turpentine, Wax, and Sheeps fetter molten, renewing it every day once until it be whole. And the rift being closed in the top, draw him betwixt the hair and the hoof with a hot Iron overtoward that place, to the intent that the hoof may shoot all whole downward, and when the Horse goeth upright, ride him with no other shoe, until his hoof be thoroughly hardened again.

## Of halting behind, and where the grief is.

Blundevile.

**I**F a Horse halt behind, the grief must either be in the hip, in the stifle, in the hough, in the ham, in the leg, in the neather joint, pattern or foot. If he halt in the hip of a new hurt, the Horse will go sideling, and not follow so well with that leg as with the other; but if it be old hurt, the fore hip will shrink and be lower than the other. And is best seen, when he goeth up a hill, or upon the edge of some bank, so as the work leg may go on the higher side, for then he will halt so much more, because it is painful unto him to go so unevenly wringing his leg. If the grief be in the stifle, then the Horse in his going will cast the stifle joint outward, and the bone on the inside will be firmer than the other. If the grief be in the hough, then it is by means of some Spaven, or some other hurt apparent to the eye. And the like may be said of the ham, wherein may be seen the Selander, or such like apparent forance, causing the Horse to halt. If the grief be either in the leg, pattern or foot, then you shall finde it by such signes as have been taught you before. And therefore let us now speak of those forances that are properly incident to the hinder legs.

## Of the String-halt.

**T**He String-halt is a disease that maketh a Horse twitch up his leg suddenly, and so halt much, it cometh sometimes naturally, and sometimes casually, by means of some great cold whereby the sinews are strained: the best cure thereof, is to dig a pit in some dunghill, as deep as the Horse is high, and set the Horse in, and cover him with warm dung, and so let him stand the space of two hours, then take him out and make him clean, and then bathe him all over with Train-oyle made warm, and it will help him.

## Of a Horse that is hipped, or hurt in the hips.

**T**He Horse is said to be hipped, when the hip-bone is removed out of his right place, which grief is called of the *Italians*, *Mul del ancha*. It cometh most commonly by some great stripe or strain, slipping, sliding or falling. The signes be these: The Horse will halt, and in his going he will go sideling, and the fore hip will fall lower than the other, and the flesh in proceffe of time will consume clean away. And if it be suffered to run so long, it will never be restored unto his pristine estate. The best way, as *Martin* saith, to make him go upright, is to charge his hip and back with Pitch and Rosen molten together, and laid on warm, and then some flocks of his own colour to be clapped upon the same, and so let him run to grasse until he go upright. But the fore hip will never rise again so high as the other. If the Horse be not hipped, but only hurt in the hip, and that newly, stirring them continually until they be thoroughly mingled together, and anoint the fore place against the hair with this Ointment every day once, the space of a fortnight, and make the Ointment to sink well into the flesh, by holding a hot broad bar over the place anointed, weaving your hand to and fro, until the Ointment be entred into the skin. And if at the fortnights end, you see that the Horse amendeth no whit for this, then slit a hole downward in his skin, and an inch beneath the hip-bone, making the hole so wide, as you may easily thrust in a rowel with your finger, and then with a little broad file or iron, loosen the skin from the flesh above the bone, and round about the same, so broad as the rowel may lie flat and plain betwixt the skin and the flesh, which rowel would be made of soft Calves Leather, with a hole in the midst like a ring, having a threed tied unto it, to pull it out when you would cleanse the hole, and if the rowel be rolled about with flax fast tied on, and anointed with the ointment under written, it will draw so much the more; and thrust in the rowel first double, and then spread it abroad with your finger. That done, tent it with a good long tent, of flax or tow dipt in a little Turpentine and Hogs grease molten together and made warm, and cleanse the hipe, and the rowel every day once, and also renew the tent every day for the space of a fortnight. And before you dress him, cause him every day to be led up and down a foot pace a quarter of an hour, to make the humors come down, and at the fortnights end pull out the rowel, and heal up the wound with the same salve, making the rent every day lesser and lesser until it be whole. And so soon as it is whole, draw with a hot Iron crosse lines, of eight or nine inches long, right over the hip-bone, so as the rowelled place may be in the very midst thereof, and burn him no deeper, but so as the skin may look yellow, and then charge all that place, and over all his buttocks with this charge: Take of Pitch a pound, of Rosen half a pound, of Tar half a pint; boyl them together, and then being good and warm, spread it on with a clout tyed in a riven stick, and then clap on a few flocks of the Horses colour. And if it be in Summer, let the Horse run to grasse a while, for the more he travellet at his own will, the better it is for him.

## Of stifling, and hurts in the stifle.

**T**He Horse is said to be stifled, when the stifling bone is removed from the place; but if it be not removed nor loosened, and yet the Horse halteth by means of some grief there, then we say that the Horse is hurt in the stifle, and not stifled. The stifle cometh by means of some blow, or some great strain, slipping or sliding. The signes be these; If he be stifled, the one bone will stick all points like unto the shoulder-pight, and standing in the stable, let him have a pattern with a Ring on his fore-leg, and thereunto fasten a cord, which cord must go about his neck, and let it be so much strained, as it may bring his fore leg more forward than the other to keep the bone from starting out. But if the Horse be hurt in the stifle with some stripe or strain, then the bone will not stand out, but perhaps the place may be swollen. The cure, according to *Martin*, is thus; First anoint the place with the Ointment mentioned before, every day once the space of a fortnight; and if the Horse amend not with this, then rowel him with a hearen rowel, or else with a quill, and let the neather hole be somewhat before the fore place, and cleanse the hole every day, by turning the rowel, continuing still to anoint the place with the Ointment aforesaid, and that will make him whole.





If a Horse be galled in the pasterns, with shakel, lock pastern; or halter, anoint the fore place with a little Honey and Verdigrise boyled together; untill it look red, which is a good Ointment for all gallings on the withers, and immediately throw upon the Ointment, being first laid upon the leg, a little chopr flax or tow, and that will stick fast, continuing so to do every day once untill it be whole.

*Of hurts in the Legs, that cometh by casting in the halter or collar.*

Blundeville.

It chanceth many times, that a Horse having some itek under his ears; is desirous to scratch the same with his hinder-foot, which whilst he scratcheth to and fro, doth fasten in the collar, or halter, wherewith the more that he striveth the more he galleth his legs; and many times it chanceth for that he is tyed so long, by means whereof being laid, and the halter slack about his feet, rising perhaps or turning he sharleth himself so as he is not able to get up, but hangeth either by the neck or legs, which sometime are galled even to the hard bone.

Kuffus calleth such kind of galling *Capsitum*, which he was wont to heal with this Ointment here following; praising it to be excellent good for the cratches, or any scab, bruise, or wound. Take of Oyl Olive one ounce, of Turpentine two or three ounces; melt them together over the fire, and then put thereunto a little Wax, and work them well together, and anoint the fore place with it. Martin saith it is good to anoint the fore place with the white of an Egge and Salter Oyl beaten together; and when it cometh to a scab, anoint it with Butter being molten; untill it look brown.

*Of the Cratches, or Raynails, called of the Italians, Crepacie.*

This is a kinde of long scabby sits, growing right up and down in the hinder parts, from the fenderlock unto the curb; and cometh for lack of clean keeping, and is easily seen if you take up the Horse's foot, and lift up the hair. The cure according to Martin is thus: Take of Turpentine half a pound, of Honey a pint; of Hogs-grease a quartern, and three yolks of Egges, and of Bole-armony a quartern, beaten into fine powder; of Bean-flower half a pint; mingle all these well together, and make a salve thereof, and with your finger anoint all the fore places, sheading the hair as you go, to the intent you may the easier finde them, and also to make the salve enter into the skin, and let the Horse come in no wet, untill he be whole.

*Of the Seranthes.*

Markham.

Cratches will cause a Horse to halt, and they come only by naughty keeping, and they appeare in the pasterns under the Feet-locks; as if this skin were cut over-shards, that a man may lay in Wheat-straw. The cure is thus: Binde unto them, (the hair being cut clean away) blisk Sope and Lime kned together, for three days, then lay that by, and anoint the place with Butter; and heal the fore with Bores grease and Tan mixt well together.

*Of the Ring-bone.*

This is a hard gristle growing upon the cronet, and sometime goeth round about the coronet, and is called in Italian, *Sporro*. Laurentius Kuffus saith, that it may grow in any other place of the leg; but then we call it not a Ring-bone, but a knot or knob. It cometh at the first time by some blow of another Horse, or by striking his one foot against some stub, or stone, or stick like casualty. The pain whereof breedeth a viscous and stinky humor, which resorting to the bone, that are of their own nature cold and dry, waxeth hard, cleaveth to some bone, and in process of time breedeth a bone. The signes be these: The Horse will halt, and the hard swelling is apparent to the eye, being higher then any place of the cronet. The cure according to Martin is thus: First wash it well with warm water, and shave away all the hair, so as the fore place may be all discovered. Then scarifie it lightly with the point of a razor, so as the blood may issue forth; then if the fore be broad, take of Euphorbim one ounce, of Cantharides half an ounce, broken into fine powder, and of Oyl-de-bay one ounce; and if the fore be but little, the whole of this may serve: Boyl these things together, stirring them continually, left it run over; and with two or three feathers, lay it rolling hot upon the fore, and let the Horse stand in this place for half an hour after, and carry him into the stable, both giving and curing him for the space of nine days; in the end of which time he should be before in the chapter of the splent. But when the halfe beginneth to grow again, then fire the fore place with right lines from the pastern down to the comb of the hoof, and let the edge of the drawing Iron be as thick as the back of a meat-knife, and burn him so deep as the skin may look yellow: that done, cover the burning with Pitch and Rozen molten together, and clap thereon socks of the Horses own colour, or somewhat nigh the same, and about three days after lay again some of the last mentioned plaister, or Ointment; and also

new socks upon the old, and there let them remain, untill they fall away of themselves. But if these Ring-bones, on knobs, breed in any other place, then in the Cronet, you shall cure them as is before said, without firing them.

*Of the Ring-bone.*

The Ring-bone is an ill disease, and appeareth before on the foot above the hoof, as well before as behinde, and will be two or three inches broad, and a quarters of an inch or more of height, and the hair will laye and was thin, and will make a Horse halt much. The cure is: Call the Horse, and with an Iron made flat and thin, burn away that gristle which annoys him; then take Wax, Turpentine, Rozen, Tar, and Hogs-grease, of each like quantity, mingle them together Plaister-wise, and with it cure the fore: This Plaister will also cure any other wound or ulcer whatsoever.

*Of the Crown-scab.*

This is a kinde of filthy and stinking Scab, breeding round about the feet upon the Cronets, and is an evil and painful disease, called in Italian, *Crislaria*. It seemeth to come by means that the Horse hath been bred in some cold wet soil, striking corrupt humors up to his face; and therefore the Horse that hath this grief is worse troubled in Winter then in Summer. The signes be these: The hair of the Cronets will be thin and staring like bristles, and the Cronets will be always mattering, and run on a water. The cure according to Martin is thus: Take of Sope, of Hogs-grease, of each half a pound, of Bole-armony a little, of Turpentine a quartern; and mingle them all together, and make a Plaister, and binde it fast on, renewing it every day once, untill it leave running, and then wash it with strong Vinegar being luke-warm, every day once, untill the fore be clean dried up, and let him come in no wet untill it be whole.

*Of hurts upon the Cronet crossing one foot over another, which the Italians call Supraposse.*

Martin saith, wash it well with white Wine, or with a little stale, and then lay unto it the white of an Egge, mingled with a little Chimney foot and Salt, and that will dry it up in three or four days, it is renewed every day once.

*Of the Quitter-bone.*

This is a hard round swelling upon the Cronet, betwixt the heel and the quarter, and groweth most commonly on the inside of the foot, and is commonly called of the Italians, *Senla* or *Sento*. It cometh by means of gravel gathered underneath the shoe, which fretteth the heel, or else by the cloying or pricking of some nail evil driven, the anguish whereof loosenseth the gristle, and so breedeth evil humors, whereof the Quitter-bone springeth. The signes be these: The Horse will halt, and the swelling is apparent to the eye, which in four or five days cometh to a head, will break out with matter at a little deep hole like a *Fistula*. The cure according to Martin is thus: First, burn about the quitter-bone with a hot Iron, in manner of half a circle, and then with the same Iron draw another right strike through the midle thereof. Then take of Arsenick the quantity of a Bean beaten into fine powder, and put it into the hole, thrusting it down to the bottom with a quill, and stop the mouth of the hole with a little tow, and binde it so fast with a cloth and cord, as the Horse may not come at it with his mouth, and so let it rest for that day. And the next day, if you see that the fore looketh black within, then it is a signe that the Arsenick hath wrought well and done his part. Then to allay the burning thereof, rent the hole with flax dipt in Hogs-grease, and Turpentine, molten and mingled together, and cover the tent with a bolles of Tow dipt also in the Ointment aforesaid, continuing so to do every day once, untill you have gotten out the core. Then shall you fee whether the loose gristle in the bottom be uncovered or not; and if it be uncovered, then feel with your finger, or with a quill, whether you be nigh it or not. And if you be, then raise the gristle with a little crooked instrument, and pull it clean out with a pair of small nippers, meet for the purpose. That done, tent it again with a full tent dipt in the aforesaid Ointment, to allay the anguish of the last dressing, and stop it hard, to the intent that the hole may not shrink together, or close up; and the next day take out the tent, and tent it a new with the Salve or Ointment taught in the Chapter of the Shaker-gall, renewing it every day once untill it be whole, keeping always the mouth of the fore as open as you may, to the intent that it heal not up too fast; and let not the Horse be in any wet, nor travel, untill he be perfectly whole.

*Of the Quitter-bone.*

Quitter-bone is a round hard swelling upon the Cronet of the hoof, betwixt the hoof and the quarter; and for the most part groweth on the inside of the foot: the Original effect thereof is the fretting of gravel underneath the shoe, which bruisth the heel; or else by means of some



## of loosening the Hoof.

**T**his is a parting of the hoof from the croner, called of the *Italians*, *Disfollatura del unghia*, which if it be round about, it cometh by means of foundering; if in part, then by the anguish caused by the pricking of the canel nail, piercing the sole of the foot, or by some Quiter-bone, Retreat, Graveling, or Cloying, or such like thing: The signes be these: When it is loosened by foundering, then it will break first in the fore-part of the Croner, right against the toes, because the humor doth covet always to descend towards the toe. Again, when the pricking of a canel nail, or such like cankered thing is the cause, then the hoof will loosen round about, equally even at the first. But when it proceedeth of any of the other hurts last mentioned: then the hoof will break right above the place that is offended, and most commonly will proceed no further. The cure according to *Martin* is thus: First, of whichsoever of these causes it proceeds, be sure to open the hoof in the sole of the foot, so as the humor may have free passage downward, and then restrain it above with the Plaster restrictive before mentioned, and in such order as is there written, and also heal up the wound, as is before taught in the Chapter of a prick in the sole of the foot.

## of casting the Hoof.

**T**his is when the coffin falleth clean away from the foot, which cometh by such causes as were last rehearsed, and is so apparent to the eye, as it needeth no signes to know it. The cure according to *Martin* is thus: Take of Turpentine one pound, of Tar half a pint, of unwrought Wax half a pint: Boil all these things together, and stir them continually until they be thoroughly mingled, and compact together. Then make a Boot of Leather with a good strong sole meet for the Horses feet, to be laced or buckled about the pattern; and dress his foot with the Salve aforesaid laid upon the Flax or Tow, and bolster or stuffe his foot with soft Flax, so as the Boot may grieve him no manner of way, renewing it every day once until it be whole, and then put him to graze.

## of the Hoof-bound.

Blundevile.

**T**his is a shrinking of all the whole hoof. It cometh by drought, for the hoof perhaps are kept too dry, when the Horse standeth in the stable, and sometime by means of heat, or of over-straight shoeing. The *Italians* call the Horse thus grieved *Incastellado*. The signes be these: The Horse will halt, and the hoofs will be hot; and if you knock on them with a hammer, they will sound hollow like an empty bottle, and if both the feet be not hoof-bound, the fore foot will be lesser than the other indeed, and appear so to the eye. The cure according to *Martin* is thus: Pull off the shoes, and those him with half Moon-shoes called *Lunette*; the order and shape whereof you shall finde among the Farriers, and rafe both the quarters of the hoof with a drawer, from the croner unto the sole of the foot, so deep as you shall see the dew it self come forth. And if you make two rases on each side, it shall be so much the better, and enlarge the hoof the more. That done, anoint all the hoof about, next unto the croner round about, with the Ointment prescribed before in the Chapter of calling the hoof, continuing so to do every day once until he begin to amend for the space of a month; and if he goeth not well at the months end, then take off the half shoes, and pare all the soles, and thrushes, and all so thin as you may see the dew come forth, and tack on a whole shoe; and stop all the foot within with Hogs-grease and Bran boiled together, and laid hot to the foot; renewing it dayly once the space of nine days, to the intent the sole may rise. But if this will do no good; then take away the sole clean, and clip on a whole shoe, and stop the foot with Nettles and Salt brayed together, renewing it once a day, but not over hard, to the intent the sole may have liberty to rise, and being grown again, let him be shod with the lunets, and sent to graze.

## of the running Frush.

**T**he Frush is the tenderest part of the hoof towards the heel, called of the *Italians*, *Fruva*, and because it is fashioned like a forked head, the *French* men call it *Furette*, which word our Farriers; either for not knowing rightly how to pronounce it; or else perhaps for easiness sake of pronunciation, do make it a monosyllable, and pronounce it the Frush; in which Frush breedeth many times a rottenness or corruption proceeding of humors that cometh out of the leg, whereby the leg is kept clean from the Windgals, and all other humors and swellings by means that the humor have passage that way. Notwithstanding the discomfort of the forance is greater than the commodity, because it maketh the Horses feet so weak and tender, as he is not able to tread upon any hard ground. The signes be these:

The Horse will halt, and especially when the passage of the humor is stoppt with any gravel gathered in the Frush, and not being stoppt it will continually run, the favour whereof will be so strong, as a man is not able to abide it, and in some places it will look raw. The cure according

to *Martin* is thus. First take off the shoe and pare away all the corrupt places; and make them raw, so as you may fee the water issue out of the raw places; then tack on the shoe again, being first made wide and large enough. That done, take of Soor one handful, of Salt as much; bruise them well together in a dish, and put thereunto the white of three Eggs, and temper them together, and with a little Tow dipt therein, stop all the foot, and especially the Frush, and splent it so as it may not fall out, renewing it once a day the space of seven days, and then he will be whole. During which time let the Horse rest, and come in no wet, at the seven days end leave stopping him, and ride him abroad, and always when he cometh in, let his fore foot be clean washed, that no gravel remain therein, without doing any more unto him.

## Of the Frush.

**T**he Frush is the tenderest part of the sole of the foot, which by humors distilling many times down from the legs, occasion inflammations in that part, which may easily be perceived by the impoltumation of the same. The cure is thus: First having taken off the shoe, pare away all the corrupted and naughty matter, until the fore look raw, then nail on a hollow shoe made for the same purpose; and take of foot a handful, of the juyce of House-leek and of Cream, with the white of an Egge or two, as much as will thicken the same: with this stop up the fore, and splint it, so as it may not fall out, renewing it until it be whole: but during the cure, have regard that the fore foot touch not any wet, for that is very much hurtful.

Markham.

## of diseases or griefs indifferently incident to any part of the body, but first of the Leprosie, or universal Manginess, called of the old Writers Elephantia.

**T**his is a cankered Manginess, spreading over all the body, which cometh of abundance of melancholy, corrupt and filthy blood. The signes be these: The Horse will be all mangy and scurvy, full of scabs, and raw plots about the neck, and evil favoured to look on, and always rubbing and scratching. The cure according to *Martin* is thus: Let him blood the first day in the one side of the neck, and within two days after that, in the flank veins; and last of all, in the vein under the tail. Then wash all the fore places with Salt brine, and rubbing them hard with a wife of straw hard twisted, so as they may bleed well, and be all raw. That done, anoint the place with this Ointment: Take of Quick-silver one ounce, of Hogs-grease one pound, of Brimstone beaten into powder a quart, of Rape Oyl a pint; mingle these things well together, until the Quick-silver be thoroughly incorporated with the rest; and having anointed all the raw places with this Ointment, make it to sink into the flesh, by holding and weaving up and down over it a hot broad bar of Iron, and then touch him no more again the space of two or three days; during which time, if you see that he rubbeth still in any place, then rub that place again with an old Horse-combe, to make it raw, and anoint it with fresh Ointment. But if all this will not help, then with a hot Iron, and blunt at the point, so big as a mans little finger, burn all the mangy places, making round holes, passing only through the skin, and no further. For which intent it shall be needful to pull the skin first from the flesh, with your left hand, holding it still until you have thrust the hot Iron through it, and let every hole be a span off one from another, and if need be, you may anoint those holes with a little Sops, and let the Horse be thin dieted, during his curing time.

## of the Farcin, called in Italian of some Il verme, and of some Farcina.

**T**his kinde of creeping Ulcer groweth in knots, following a long fine vein, and it proceedeth of corrupt blood ingendered in the body, or else of some outward hurt, as of spur-galling, or the biting of some other Horse, or of biting of ticks, or of Hogs lice, or such like casualties: Or if it be in the legs, it may come by interfering. It is easily known, partly by the former description, and also it is apparent to the eye. The cure according to *Martin* is thus: Let him blood in that vein where it cometh, as nigh the fore place as may be, and let him bled well; then fire every knot one by one, taking the knot in your left hand, and pulling it so hard as you can from his body, to the intent you may better pierce the knot, with a blunt hot Iron, of the bigness of a mans fore-finger, without doing the body any hurt, and let out the matter, leaving none unburn'd, be it little or much. That done, anoint every knot so burped with Hogs-grease warmed every day once, until the coars be ready to fall away: and in the mean time prepare a good quantity of old Urine, and when you see the coars ready to fall, boil the Urine, and put therein a little Copperas and Salt, and a few strong Nettles, and with that water being warm, wash out all the coars; and the corruption.

That done, fill every hole immediately with the powder of Beckett lime, continuing thus to do every day once, until the holes be closed up, and if any be more ranker then other, fill those with Verdigrise; and during this cure let the Horse be thinly dieted, that is to say, with straw and water only, unless it be now and then to give him a loaf of bread: for the lower he be kept, the sooner he will be whole. And in any wise let his neck be yoked in an old bottomless pail; or else

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with







## Of Lice, and how to kill them.

Blundevile.

They be like Geese Lice, but somewhat bigger, they will breed most about the ear, neck, and tail, and over all the body. They come of poverty, and the Horse will be alwayes rubbing, and scratching, and will eat his meat, and not prosper withal, and with rubbing he will break all his mane and tail. The cure, according to Martin, is thus: Anoint the place with Sope and Quicksilver, well mingled together, and to a pound of Sope, put half an ounce of Quicksilver.

## Of Loups.

Markham.

There be Horses that will be Loups, and it cometh of poverty, cold and ill keeping, and it is oftenest amongst young Horses, and most men take little heed unto it, and yet they will die thereon. The cure is, to wash them three mornings together in Stau-aker and warm water.

## How to save Horses from the stinging of flies in Summer.

Anoint the Horses coat with Oyle, and Bay-beries, mingled together, or tie to the headstall of his collar, a sponge dipt in strong Vinegar, or sprinkle the stable with water wherein Herb-grace hath been laid in steep, or perfume the stable with Ivie, or with Calamint, or with Gith burned in a pan of coles.

## Of bones being broken out of joynt.

Few or none of our Farriers do intermeddle with any such griefs, but do refer it over to the Bone-setter, whose practised hand, I must needs confesse, to be needfull in such business. Notwithstanding, for that it belongeth to the Farriers art, and also for that the old writers do make some mention thereof, I thought good not to passe it over altogether with silence. Albeit, they speak only of fractures in the legs beneath the knee. For they make little mention or none of bones above the knee, taking them to be incurable, unless it be a rib, or such like. If a bone then be broken in the leg, it is easie to perceive, by feeling the roughness and inequality of the place grieved, one part being higher then another. The cure whereof, according to *Abrinus* and *Hieracius*, is thus: first

First put the bone again into his right place: that done, wrap it about with unwash't wool, binding it fast to the leg with a small linnen roller, soaked before in Oyl and Vinegar mingled together. And let that roller be laid on as even as is possible, and upon that again lay more wool dipt in Oyl and Vinegar, and then splent it with three splents, binding them fast at both ends with a thong, and let the Horses leg be kept straight, and right out, the space of forty days, and let not the bonds be loosened above three times in twenty days, unless it shrink, and so require to be new dress'd, and bound again. But fail not every day once, to pour on the fore place, through the splents, Oyl and Vinegar mingled together. And at the forty dayes end, if you perceive that the broken place be sowerd together again with some hard knob or gristle; then loosen the bonds, so as the Horse may go fair and softly, using from that time forth to anoint the place with some soft greas or Ointment.

## Of broken bones.

Markham.

I have not for mine own part had any great experience in broken bones of a Horse; because it chanceth seldom, and when it doth chance, what through the Horses brutish unruliness, and the immoderate manner of the act, it is almost held incurable; yet for the little experience I have, I have not found for this purpose any thing so soverain or absolute good, as Oyl of Mandrag, which applied, conglutinateth and bindeth together any thing, especially bones being either shivered or broken.

## Of bones out of joynt.

Blundevile.

If a Horses knee or shoulder be clean out of joynt, and no bone broken, *Martin* saith the readiest way is, to bind all the four legs together, in such sort as hath been taught before in the Chapter of Incording, and then to hoist the Horse somewhat from the ground, with his heels upward, so shall the weight and poise of his body, cause the joynt to shoot in again into the right place: for by this means he pleased not long since a friend and neighbour of his, who going with his Cart from *S. Albons*, towards his own house, his Thiller fell and put his shoulder clean out of joynt, so as he was neither able to rise, nor being holpen up, could stand on his legs: to which mischance *Martin* being called, made no more ado, but taking his friends Cart-ropes, bound the Horses legs all four together, and with a lever being staid upon the Cart wheel, they putting their shoulders to the other end, hoisted up the Horse clean from the ground, the poise of whose body made the bone to return into

his right place, with such a loud knock or crack, as it might be heard a great way off, and the Horse immediately had the use of his leg, so as he drew in the Cart, and went also safe home without complaining thereof ever after.

## Certain receipts of Plaisters, very good for broken bones, taken out of the old Authors, writing of Horse-leach craft.

Take of *Spuma argenti*, of Vinegar, of each one pound, of Sallet Oyl half a pound, of *Ammoniacum*, and Turpentine, of each three ounces, of Wax, of *Rosin*, of each two ounces, of Bitumen, of Pitch, of Verdigrise, of each half a pound. Boil the Vinegar, Oyl and *Spuma argenti* together, until it was thick, then put thereunto the Pitch, which being molten, take the pot from the fire, and put in the Bitumen, without stirring it at all, and that being also molten, then put in all the rest, and let the por again to the fire, and let them boyl all together until they be all united in one: that done, strain it, and make it in a plaister form, and this is called *Hieracley* Plaister.

## Another rectis for broken bones.

Take of liquid Pitch one pound, of Wax two ounces, of the purest and finest part of Frankincense one ounce, of *Ammoniacum* four ounces, of dry Roses, and of *Galbanum*, of each one ounce. of Vinegar two pintes. Boil first the Vinegar and Pitch together, then put in the *Ammoniacum*, dissolved first in Vinegar, and after that, all the rest of the aforesaid drugs, and after they have boyled together, and be united in one, strain it, and make it plaisterwise, and this is called *Emplastrum flavum*, that is to say, the Yellow plaister.

## An Ointment for broken bones.

Take of old Sallet Oyl a quart, and put thereunto of Hogs grease, of *Spuma niri*, of each one pound, and let them boyl together until it begin to bubble above, and let this ointment be very warm when you use it.

Hitherto of all the diseases belonging to a Horse. Now therefore my promise was made unto you to speak of those things wherein the cure of all diseases do consist, that is to say, in letting of blood, in taking up of veins, in purging, and in giving the fire; yea, and also order it self bindeth me to treat of the said things presently, and first of letting blood.

## In how many veins a Horse may be let blood, and to what end.

As touching the order, time of the year, Moon, and day, and other circumstances belonging to letting of blood, we have sufficiently spoken already in the Keepers Office, in the 22 Chapter. It resteth therefore here to shew you what veins should be opened when the Horse is sick of any disease, according to *Vegetius* opinion. But first I will rehearse unto you once again, in how many veins a Horse may be let blood, and the rather for that I follow *Vegetius*. A Horse then may be let blood in the Temple veins. *Item*, in the two eye veins, which are easie to finde in the face of the Horse, somewhat beneath the eyes. *Item*, in the two palat veins of the mouth. In the two neck veins. *Item*, in the two palat veins which are in the breast. *Item*, in the two fore thigh veins. *Item*, in the four shakle veins before. *Item*, in the two toe veins before. *Item*, in the two side veins, which may be otherwise called flank veins. *Item*, in the tail vein. *Item*, in the two hanch veins. *Item*, in the two hough veins. *Item*, in the four shakle veins behind. *Item*, in the two toe veins behind; so that by this account, a Horse may be let blood in 31 veins. All which veins are easie enough to know, because that every one lyeth in a little gutter, which by feeling softly with your finger, you shall finde immediately.

And *Vegetius* saith, that if any Horse be pained with any grief in his head, as with ach, heaviness, frenzy, falling-evill, or such like, then it is good to let him blood in the two temple veins with a steem. If his eyes be waterish; bloodstorten, or grieved with pin, web, or haw, then it is good to strike the eye vein with a steem. If he have any heaviness or weariness of body, or be diseased in the throat with the strangullion, quinzie, or swelling of the arteries, either within or without, then it is good to let him blood in the mouth, in the palat veins with a Cornet. If he be vexed with an Ague, or with any other disease universally hurting the body, then let him blood in the neck veins. If his grief be in the lungs, liver, or in any other inward member, then let him blood in the breast veins, which we called before the palat veins. If he be grieved in the shoulder, then let him blood in the fore-thigh veins above the knee with a lancet, and that very warily, because that place is full of sinews, and if he be grieved in his joynts, then let him blood in the shakle veins, and that warily, because that place is also full of sinews.

And if he be foiled on his fore-feet, by foundering or otherwise, then let him blood in the toe veins, making way first with your drawer, or Cornet in the hoof to come to the vein. If he be diseased in the kidneys, reins, back, or belly, then let him blood in the flank veins, and in the tail. If he hath any grief in his hips, or houghs, then let him blood in the hip or hough veins. And if

his

his hinder-legs, joynts, or feet be grieved, then let him bloud in the shakel veins, and toe veins, as is aforesaid.

*The order of taking up Veins, and wherefore it is good.*

Blundeville.

He order observed by *Martin*, is in this sort: First, if the Horse be very curst and shrewd, then cast him upon a dunghill, or some straw, then having found the vein that you would take up, marke well that part of the skin which covereth the vein, and pull that somewhat aside from the vein with your left thumb, to the intent you may slit it with a Razor, without touching the vein. And cut no deeper then only through the skin, and that longest wise, as the vein goeth, and not above an inch long. That done, take away your Thumb, and the skin will return again into his place, right over the vein, as it was before. Then with a Cornet uncover the vein and make it up, and being bare, thrust the Cornet underneath it, and raise it up, so as you may put a Shoemakers net standing so still, slit the vein longest wise that it may bleed, and having bled somewhat from above, then knit it up with a sure knot, somewhat above the slit, suffering it to bleed only from beneath, and having bled sufficiently, then knit up the vein also beneath the slit with a sure knot and fill the hole of the vein with Salt, and then heal up the wound of the skin with Turpentine and Hogs greafe molen together, and laid on with a little Flax. The taking up of veins is very needfull, and doth ease many griefs in the legs: for the taking up of the fore-thigh veins caeth Parvins, ry, and doth ease many griefs in the legs: for the taking up of the shakel veins before, caeth the Quittre-bone and swellings of the legs: the taking up of the hinder veins, helpeth the Parvins, swelling of the joynts, scabs, and cratches. The taking up of the shakel veins behind, helpeth swelling of the joynts, the pains, and kided heels, and such like diseases.

*Of Purging with Purgation or Glyster.*

Purgations is defined by the Physitians, to be the emptying or voiding of superfluous humors, annoying the body with their evil quality. For such humors bring evil juyce and nutriment, called of the Physitians *Cacochymia*, which when it will not be corrected or holpen with good diet, alteration, nor by the benefit of nature and kindly heat, then it must needs be taken away by Purgation, Vomit, or Glyster. But forasmuch as Horses are not wont to be purged by Vomit, as men are, I will speak here only of Glysters and Purgations. And first because a Horse is grieved with many diseases in his guts, and that nothing can purge the guts so well as a Glyster, and especially the thick guts, I with that our Farriers would learn to know the diversities of Glysters, to what end they serve, and with what drugs or simples they should be made, for as the disease requireth, so must the Glyster be made: some to allay griefs and sharpness of humors, some to binde, some to loosen, some to purge evil humors, some to cleanse Ulcers: but our Farriers use Glysters, only to loosen the belly, and for no other purpose; yea, few or none do that unless it be *Martin*, and such as he hath taught, who is not ignorant that a Glyster is the beginning of purgation. For a Glyster, by cleansing the guts, refresheth the vital parts, and prepareth the way before. And therefore whensoever a Horse is surfeited and full of evil humors, needing to be purged, and specially being pained in the guts, I would with you to begin first with a Glyster, left by purging him by medicine upon the sudden, you stir up a multitude of evil humors, which finding no passage downward, because the guts be stoppt with winde and dregges, do strike upwards, and so perhaps put the Horse in great danger.

But now you shall understand, that Glysters be made of four things, that is to say, of Decoction, of Drugs, of Oyls, or such like unctuous matters, as Butter and soft greafe, and fourthly of divers kinds of Salt to provoke the virtue expulsive. A Decoction is as much to say as the broth of certain herbs or simples boyled together in water till the third part be consumed. And sometime instead of such Decoction, it shall be needfull perhaps to use some fat broth, as the broth of Beef, or of Sheeps heads, or Milk, or Whay, or some other such like liquor, and that perhaps mingled with Honey or Sugar, according as the disease shall require, the Glyster to be either Lensitive, that is to say, easing pain; or Glutinative, that is, joining together; or else Absterive, that is to say, cleansing. Of Oyl at the least half a pint, and of Salt two or three drams, and then to be mingled luke-warm with a horn or pipe made of purpule, when the Horse is not altogether full pained, but rather empty, be it either in fore-noon, or after-noon. And as touching the time of keeping the Glyster in the body, you shall understand, that to Glysters absterive, half an hour or less may suffice, to Glysters Lensitive, a longer time if it may be: and to Glysters Glutinative, the longest time of all most needfull.

*Of Purgations.*

Purgations for Men may be made in divers sorts and forms; but Horses are wont to be purged only with pills, or else with purging powders put into Ale, Wine, or some other liquor. But the simples whereof such pills or powders be made, would be chosen with judgement and apply applied, so as you may purge away the hurtful humors, and not the good. Learn first therefore to know with what humor or humors the Horse is grieved, be it Choleric, Flegmatic, or Melancholic, and in what part of the body such humors do abound; then what simples are best to purge such humors, and with what property, quality, and temperament they be induced: For some be violent and next custom to poison, as Scammony, or *Calocymida*. Some again are gentle, and rather meat than medicines, as *Manna*, *Cassia*, *Whay*, *Prunes*, and such like. And some again be neither too violent, nor too gentle, but in a mean, as *Rhubarb*, *Agarick*, *Sene*, *Aloes*. The old men did use much to purge Horses with the pulp of *Calocymida*, and sometime with the roots of wilde Cowcumber; and sometime with the broth of a foddren Whelp mingled with *Nitrum*, and divers other things, wherof I am sure I have made mention before in the curing of Horses diseases.

Notwithstanding I would not wish you to be rash in purging a Horse after the old mens example. For as their simples many times be very violent, so the quantities thereof by them prescribed are very much, and dangerous for any Horse to take in these days, in the which neither man nor beast, as it seemeth, is of such force or strength as they were in times past. And therefore whensoever you would purge him with such like kinde of Purgations as *Martin* useth, wherof you have example before in divers places; and whensoever you list for knowledge sake to deal with other simples, to prove them first upon such Jades as may well be spared. For whosoever minded to purge a Horse well, that is, to do him good and no hurt, had need to consider many things: as the nature of the Horses disease, and the Horses strength; also the nature, strength and quantity of the medicine that he ministrereth: the Region, or Countrey, the time of the disease, the time of the year and day. For as the diseases and evil humors causing such diseases are divers, so do they require to be purged with divers medicines, diversly compounded, wherein consisteth a point of Art to be learned at the Physicians hands, and not at mine.

Again, weak, delicate, and tender Horses may not be purged in such sort, as those that be of a strong sturdy nature. And therefore in such cases the quality and quantity of the simples is not a little to be considered; neither is the hotness or coldness of the Region to be neglected, nor the time of the disease. For some require to be purged in the very beginning, some not until the matter be thoroughly digested: and though the disease proceed perhaps of cold, and cold humors, yet a man may not ministrer such hot things in Summer, as he would do in Winter, nor in the contrary case, such cold things in Winter as he would in Summer. And therefore the time and season of the year is also to be observed: yea the day and time of the day. For the more temperate the day is, the better; not in an extreme hot day, for making the Horse to faint; nor yet when the winde bloweth in the cold North, for that will stop and hinder the working of the medicine, but rather in a temperate moist day, when the winde is in the South, if it may be; for that will further and help the working of the medicine, and make the body loose and soluble.

Again for a Horse, whether you purge him with pills or drink, it is best for him (as *Martin* saith) to take them in the morning, after that he hath fasted from meat and drink all the night before. And having received his medicine, let him be walked up and down; one hour at the least, and then set him up and suffered to stand on the bit two or three hours without any meat, but in the mean time see that he be well littered, and warm covered: and at three hours end, offer him a little of a warm mash made with Wheat-meal, or with Bran or else with ground malt. Give him little meat, or none until he be purged: all which things have been shewed you before in divers places, and therefore I think it not good to be tedious unto you with often recital thereof.

*Of Cauterization, or giving the fire, as well actual as potential.*

Forasmuch as the Fire is judged of all the old Writers to be the chiefeft remedy, and as it were the last refuge in all diseases almost whereunto a Horse is subject, I thought good therefore to talk of it in this place; and the rather, for that few or none of our Farriers, unless it be *Martin*, or such as have been taught, do know how to give the fire, or to what end it serveth. But first you shall understand, that according to the learned Chirurgeons, yea, also according to my old Authors, there be two kinds of Cautery, the one actual, and the other potential. The actual Cautery is that which is done only by firing of the grieved place with a hot Iron. The potential Cautery is done by applying unto the grieved place some medicine corrosive, purgative, or caustic. But we will speak first of the actual Cautery, shewing you wherefore it is good, then of what metal and fashion your instrument should be made, and finally how and when to use them. *Ancient* saith, that an actual Cautery moderately used, is a noble remedy to stop corruption of members, to rectifie the complexion of the same, and also to slanch blood. Howbeit you must beware (saith he) that you touch not the sinews, cords, or ligaments, lest the member be weakened, or that the Cramp ensueth. *Vegetius* also writing of Horse-leach-craft, praileth the actual Cautery very much, speaking in this sort: The actual Cautery saith he, bindeth together





## of the Cords.

**T**He Cord is a disease that maketh the Horse stumble, and many times fall, and they appear in a Horses fore-legs: this is the cure thereof; Take a sharp knife, and cut a slit even at the top of his nose, just with the point of the gristle, open the slit being made, and you shall perceive a white string, take it up with a Boars tooth, or some crooked bodkin, and cut it in sunder, then fetch up the slit and anoint it with Butter, and the Horse doubtless shall be recovered.

## of the Millets.

**T**He Millets is a grief that appeareth in the Fetlocks behind, and causeth the hair to shed, three or four inches long, and a quarter of an inch in breadth, like as it were bare and ill to cure. But thus is the cure; First wash it well with wrong lie, and rub it till it bleed, then binde unto it Hony, unlick't Lime, and Deers sewer, boyled and mingled together, this do for the space of a week, and it shall be whole.

## of the Serew.

**A** Serew is a foul forance, it is like a Splent, but it is a little longer, and is most commonly on the outside of the fore-leg, as the Splent is on the inside. The cure is thus; Take two spoonfuls of strong Wine Vinegar, and one spoonful of good Sallet Oyl, mingle them together, and every morning bestow one hour in rubbing the forance with it altogether downward till it be gone, which will not be long in going.

## The medicines arising out of Horses.

**T**He Grecians have written nothing at all concerning wilde Horses, because in their Country there was none of them usually bred or gotten: yet notwithstanding the same we ought to think that all medicines or any other things, which do proceed from them, are more strong in operation, and have in them greater force and power than any common Horses have, as it falleth out in all sorts of other beasts.

The blood of a Horse (as Pliny affirmeth) doth gnaw into dead flesh with a putrified force; the same vertue hath the blood of Mares, which have been covered by Horses: Also the blood of a Horse (but especially of one which is a breeder) doth very much make and help against impostumes, and small bunches which do arise in the flesh. Moreover it is said that the blood of a young Asse is very good against the Jaundies, and the over-flowing of the gall, as also the same force and effect is in the blood of a young Horse. The Horse-leaches do use the blood of Horses for divers diseases which are incident unto them, both by anointing or rubbing the outward parts, as also within their bodies.

Furthermore if one do cut the veins of the palat of a Horses mouth, and let it run down into his belly, it will presently destroy and consume the maw or belly-worms, which are within him. When a Horse is sick of the Pelentice, they draw blood out of the veins in his spurting place, and mingling the same upon a stone with Salt, make him to lick it up. The blood of a Horse is also mingled with other medicines, and being anointed upon the armes and shoulders of men or beasts, which are broken or out of joynt, doth very much help them. But a Horse which is weary or tired, you must cure after this manner; First, draw some blood out of his matrix or womb, and mingle it with Oyl and Wine, and then put it on the fire till it be luke-warm, and then rub the Horse all over against the hairs.

If the sinews of Horses do wax stiffe or shrink in together, it is very necessary that the sick parts should be anointed with the hot blood which doth proceed from him, for Horses also which are fed in the field use their flesh and dung, against the biting and stinging of Serpents.

We do also finde that the flesh of Horses being well boiled is very medicinale for divers diseases. Moreover it is very usuall and common with the women of Occitania to take the fat or grease of Horses to anoint their heads to make the hair of their heads multiply and increase; and certain later Physitians do mingle the marrow of a Horse with other Ointments for a remedy against the Cramp.

The marrow of a Horse is also very good to loosen the sinews which are knit and fastned together, but first let it be boyled in Wine, and afterwards made cold, and then anointed warmly either by the fire or Sun. If a Horse do labor in that kinde of impostume which they vulgarly call the Worm, either any where as well as in the nose, they do open the skin with a searing iron, and do sprinkle Verdigrise within the Horses mouth being brent, and being added therunto sometimes the feed of Henbane.

The teeth of a male Horse not gelded, or by any labour made feeble, being put under the head, or over the head of him that is troubled, or starteth in his dream; doth withstand and resist all unquietness which in the time of his rest might happen unto him. Pliny also doth assest that flowre doth heal the soreness of a Horses teeth and gums, and the cleits and chinks of a Horses feet.

The teeth also of a Horse is very profitable for the curing of the Chilblases which are rotten and full of corruption when they are swollen full ripe. Marcellus saith, that the tooth of a Horse being beaten and crushed into very small powder, and being sprinkled upon a Mans genital doth much profit and very effectually help him: but the teeth which were first ingendred in a Horse, have this vertue in them, that if they should touch the teeth of Man or Woman who are molested and grieved with the tooth-ach, they shall presently find a final end of their pain: if in the like manner a childe do kisse the nose or shooke of a Horse; he shall never feel pain in his teeth, neither at any time shall the childe be bitten by the Horse.

The teeth which do first of all fall from Horses, being bound or fastned upon children in their infancy, do very easily procure the breeding of the teeth, but with more speed and more effectually if they have never touched the ground, wherefore the Poet doth very well apply these Verses, saying;

*Colla iuiste, molli dentes, nec dentur equini,*

*Qui prima fuerint pulvis, crescentia cadunt.*

It is also said, that if the hair of a Horse be fastned unto the House of a mans enemy, it will be a dreant that neither little flies or small gnats shall bite by his dwelling place or aboad. The tongue of a Horse being never accustomed unto wine, is a most present and expedient medicine to allay or cure the mit of a Man or Woman (as Caelius Bunt reporteth unto us); that he learned it of the Barbarians. But Marcellus saith, that the Horse tongue ought to be dried and beaten into small powder, and put into any drink, except wine only, and forthwith it will shew the commodity which is rich thereupon, by easing either Man or Woman, of the pain of the Spleen or Milt: Divers also do think that a Horses tongue used after this manner, is a good means or preservative against the biting of Serpents or any other venomous creatures.

But for the curing of any fores or griefs in the inward parts, the genital of a Horse is most of all commended: for as Pliny supposeth, this genital of a Horse is very medicinale for the loosing of the belly, as also the blood, marrow, or liver of a Goat, but these things do rather dry up and close the belly (as before we have taught) concerning the Goat.

In the heart of Horses there is found a bone, most like unto a Dogs tooth, it is said that this doth drive away all grief or sorrow from a mans heart, and that a tooth being pulled from the cheeks or jaw bones of a dead Horse doth shew the full and right number of the tortures of the party so grieved. The duft of a Horse hoof anointed with Oyl and Water, doth drive away impostumes and little bunches which rise in the flesh, in what part of the body soever they be: and the duft of the hoof of an Asse anointed with Oyl, Water and hot urine, doth utterly expell all Wens and kernels which do rise in the neck, arme-holes, or any other part of the body, of either man or woman.

The genital of a gelded Horse dried in an Oven, beaten to powder, and given twice or thrice in a little hot broth to drink unto the party grieved, is by Pliny accounted an excellent and approved remedy for the seconds of a woman. The foam of a Horse, or the duft of a Horse blood dried is very good to drive away shamefastness, being anointed with certain situation: The scarpings of the Horses hoofs being put in wine, and poured into the Horses nostrils, doth greatly provoke his urine. The ashes also of an Horses hoof, being mingled with wine and water, doth greatly ease and drive the disease called the Colick on Stone: as also by a perfume, which may be made by the hoofs of Horses being dried, a childe which is still born is cast out.

The milk of Mares is of such an excellent vertue, that it doth quite expell the poison of small pox, bare, and all other poison whatsoever: drink also mingled with Mares milk, doth make the body soft and leazable. It is also counted an excellent remedy against the falling sickness, to drink the teares of a Boar out of a Mares milk or water. If there be any fish or man conyoling in the matrix of a woman, let her take Mares milk boiled and throughly strained, and presently this fish will excrement itself very clean away. If so be that a Woman be barren and cannot conceive, let her then take Mares milk (not knowing what it is) and let her presently accompany with a man, and she will conceive. The milk of a Mare being drunk daily twice shall drive off the magicke, and doth cause a still childe to be cast forth. If the feed of Henbane be beaten small and mingled with Mares milk, and bound with a Hares skin, so that it may not touch the ground, and when it is bound to a woman, they will hinder her conception. The blood of a Horse doth also drive off the poison of small pox, and purge the belly. Mares milk being daily anointed with a little Hony, doth without any pain or punishment take away the wounds of the eyes being new made. The grease made of Mares milk doth repress and take away all writhings or aches in the belly, whatsoever. If you anoint a comb with the foam of a Horse, wherewith a young man or youth doth use to comb his head, it is of such force as it will cause the hair of his head neither to encrease, or any whit so append. The foam of a











and tail thereof, that is, they never be sicke nor biting sharp nails, afterwards it is tamed without peril. This also is the same Beast which is called *Canis* in the bigness of a wide Ass, being in legs and Hoofs like a Hart, having his mouth reaching on both sides to his ears; and the head and face of a female like unto a Badger. It is called also *Artibe*, which in the *Prosen* tongue signifieth a devourer of men; and thus we conclude the body of the *Hyena* for her description, and her several kinds: Now followeth the medicines arising out of her several parts.

*The Medicine of the Hyena.*

The Oyl in which a *Roxen* baked either alive or dead; doth either altogether cure and make whole those which are troubled with the Gout, if so be that the disease be sickness be green or new, or at the least not of so long continuance; it doth so cure them, that although it may happen to return again, yet it will be much more mild and gentle then before it had been. But the Oyl which proceedeth from Foxes doth nothing more drive away the forenamed disease, then that which like wife is got or prepared out of the *Hyena*; for that hath an excellent and eminent quality of dissolving and dispersing. The flesh of the *Albat* is both hot and cold, and being baked with Oyl, doth very much help either men or women which have their feet Gouty, or have any pain in their joints, which may happen or come by the excession of cold: for it is of a slender and dissolute substance.

The vanity of the *Meg*, or *Wise* men, which is witty in nothing but in circumstance of words, doth say, the best time to take *Hyena* is, when the Moon passeth over the signe called *Gemin*, and that for the most part the hairs be kept and preserved. The *Meg* do also affirm; that the skin of an *Hyena* being spread upon a fore which was bitten by a mad Dog; doth presently and without any pain cure the same. The same also being bound to that part of the head, which doth ache, will immediately drive away the pain and grief thereof.

The same doth very effectually and speedily help them which are troubled with the Gout, or swelling in the joints. The flower of Barley being mingled with the blood of an *Hyena*, and fryed or baked over the fire and so taken, doth very much alluage the wringings and writhings either in the guts or belly of a man or woman. If the blood of an *Hyena* being hot be anointed on them which are infected with the Leprosie, it will without delay very effectually cure them.

The *Hyena*'s flesh being eaten doth much avail against the bitings of ravenous Dogs; but some are of opinion, that the liver being only eaten is of more force and power to cure or heal them. The uers or sinews of an *Hyena* being beaten to small powder, and dryed and mingled with Frankincense, together, and so drunk, doth restore fertility and plenty of feed in that woman which before was barren.

There is also for the biting of a ravenous Dog another excellent remedy, which is this, first to about the place so bitten with the fat or grease of a Sea-calf, or else to give it in drink; and then to make the operation more effectual, mingle the marrow of an *Hyena*, and Oyl that cometh from the Mastic tree and Wax together, and being so applyed and anointed upon the sore, it will presently cure the same. The same marrow of the *Hyena* is very good and effectual against the pain and grief in the sinews, as also for the looseness and weakness of the reins.

The marrow which proceedeth from the Chins bone of an *Hyena*, being mixed with his Gall and old Oyl together, and so boiled until they come unto a soft temperance, and mollifying medicine; being anointed upon the sinews, doth expel and force away all pain of grief thereof whatsoever. The same marrow being bound unto the back of either man or woman, who are troubled with vain phantasies or dreams in their sleep; doth very speedily and very effectually help them. The fat or grease of an *Hyena* being burnt, doth drive away all venomous Serpents from the place where it is used.

The same being mingled with leaven, and so being wrought into a plaister, is a very good cure or remedy for the falling of the hair, or the disease called the Poxes evil. The left part of the brain of an *Hyena* being either anointed upon the nostrils of either men or beasts, is of such vertue, that it will cure diseases upon them which are in a manner mortal. For the sterility or barrenness of women, the eye of an *Hyena* being mixed with Licorice, and the herb called Dill, and so taken in drink, is of such force and power, that in three days it will make them fit for conception.

The teeth of an *Hyena* either touched, or bound in order unto the teeth of any man or woman who are troubled with the tooth-ach, will presently ease the pain and vexation thereof. One of the great teeth of an *Hyena*, being bound with a string unto any that are troubled in the night times with shadowy and phantasies, (and which are frayed out of their sleep with fearful visions; doth very speedily and effectually procure them ease and rest. The tooth of an *Hyena* (called *Albat*) being bound upon the right arm of any one which is either oblivious or forgetful, and hanging down from the arm unto the middle finger or wrist, doth renew and refresh their decayed memory.

The pait of an *Hyena* being dryed and beaten to powder, and then mingled with Egyptian *Ashes*, and so made hot and mixed altogether, being three times turned in any ones mouth, which hath either sore or ulcer in it, will in small time procure them remedy and help of their vexation and trouble. The flesh which groweth upon the hinder part of the neck, being burned, and then eaten or taken in drink, doth very speedily help and cure the grief and aches of the *Roxen*.







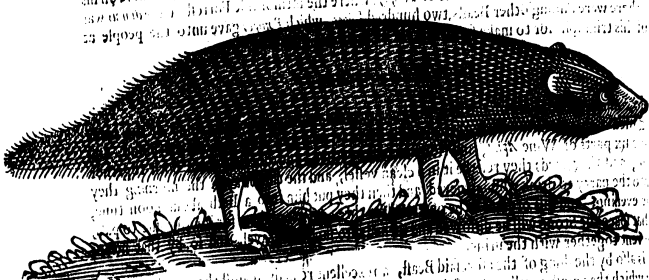


Albertus  
Vincentius.  
The quantity  
and several  
parts.

Their procrea-  
tion and fight  
one with ano-  
ther.

There be some that call it *Thymon*, and *Androthyon*, and also *Bowle*, mistaking it for that  
Beast which was wont to be called by the *Latins*, *Donela*, yet it is known to learned men  
but called these two names to signify two different Beasts. The quantity of its stature is  
sometimes as great as a small Cat or Ferret, and the kind of it is like the hairs of a hog; the eyes  
small and narrow, which signifies a malignant and crafty disposition; the tail of it very long like  
a serpent, the end turning up a little, having no joints but scales, not much unlike the tail of a  
serpent. It is a firmeth, that both Mice, beas young, having feed in themselves, whereby  
they are able to live. For those that are overcome in combats, one with another, are branded  
with a warlike mark of Villainage, on the forehead, for their Conquesture; and on the con-  
trary side they which are conquered and overcome in fight, do not only make vaunts of  
their whom they overcome, but in token thereof do further punishment, fill them with their  
teeth, by carnal copulation, so putting off from themselves all the pain and torments of  
bearing young.

This is the picture of the Ichneumon as taken by Pausanias, except the back  
which is too much elongated.



The second picture taken one up *Opianus* points out it is  
the same as the first, but the back is not so much elongated.



When it is angry the hairs stand upright, and appear of a double colour, being white and pe-  
lowish by lines or rows in equal distance, and also very hard, and sharp like the  
hair of a Wolf, the body is something longer than a Cat, and better for or compassed, the legs  
black, and sharp at the nose like a Ferret, and without beard; the ears short and round, the legs  
black, having five claws upon his hinder-feet, whereof the last or hindmost of the inner side of the  
foot is very short; his tail thick towards the rump: the tongue, teeth and stones are like a Cat,  
and this is hath peculiar, namely a large passage, compassed about with hair, on the outside of his  
excrement hole like the genital of a woman, which it never openeth but in extremity of heat.  
The place of his excrements remaining shut, only being more hollow than as other times. And  
it may be that the Authors aforesaid, had no other reason to affirm the mutation of sex in  
common transmigration of genital power, beside the observation of this natural passage in male  
and female. They bring forth as many as Cats and Dogs, and also eat them when they are  
young: they live both in land and waters, and take the benefit of both elements, but especially  
in the River Nile, amongst the Reeds, growing on the banks thereof, according to the saying of  
Nemesian;

The places of  
their abode.

— Et placidis Ichneumona querere ripis,  
Inter arundineas figetes.

For it will dive in the water like an Otter, and seem to be utterly drowned, holding in the breath  
longer than any other four-footed Beast, as appeareth by his long keeping under water, and also  
by living in the belly of the Crocodile, until he deliver forth himself, by eating through his bowels,  
as shall be shewed afterwards. It is a valiant and nimble creature, not fearing a great Dog, but fetcheth  
upon him and biting him mortally, but especially a Cat; for it killeth or strangleth her with three bites  
of her teeth, and because her beak or snout is very narrow or small, it cannot bite any thing except it  
be less than a mans fist. The proportion of the body is much like a Badgers, and the nose hangeth  
over the mouth, like as it were always angry; the nature of it is, finding the Crocodile asleep, sud-  
denly to run down into his throat and belly, and there to eat up that meat which the Crocodile hath  
devoured, and not returning out again the way it went in, maketh a passage for it self through the  
Beasts belly.

The courage  
and strength  
of this beast.

His entrance  
into a Croco-  
dile.

And because it is a great enemy and devourer of Serpents, the common people of that Countrey  
do tame them, and keep them familiarly in their houses like Cats, for they eat Mice, and likewise be-  
ware all venomous Beasts: for which cause as is said before, they call it *Pbarabi* Moule, by way of  
excellency. At Alexandria they sell their young ones in the Market, and nourish them for profit: It  
is a little Beast, and marvellously studious of purity and cleanliness.

The taming of  
Ichneumons.

*Belonius* affirmeth that he saw one of them at Alexandria, amongst the ruins of an old Castle,  
which suddenly took a Hen and eat it up, for it loveth all manner of fowls, especially Hens, and  
Chickens, being very wary and crafty about his prey, oftentimes standing upright upon his hin-  
der-legs, looking about for a fit booty, and when it espyeth his prey near him, it slideth so close  
to the ground, as is very admirable, until it be within the reach, and then leapteth upon it with  
incredible celerity, flying to the throat, and like a Lion killeth all by strangling. It eateth indif-  
ferently every living thing, as Snails, Lizards, Camels, all kinds of Serpents, Frogs, Mice,  
and Asps. For *Strabo* saith, when he findeth an Asp by the water side, it catcheth hold on the  
tail, and so draweth the Beast into the water, and receiveth help from the floods to devour her  
enemy; and whereas we have said already, that the Ichneumon entrench into the belly of the Cro-  
codile, *Ammianus Marcellinus*, *Strabo*, *Pliny*, and *Oppianus*, maketh thereof this discourse following.  
When the Crocodile hath filled his belly, and over-glutted himself with meat, he cometh to the  
land to sleep.

Their food.

Their subtlety  
in obtaining  
their prey.

Now there is in Egypt, a certain Bird called *Crocibullus*, whose nature is to wait upon the Cro-  
codile, and with her breath and claws, gently and with a kinde of delight, to pull out the remnants  
of the meat sticking in the Crocodiles teeth; wherewithal the Crocodile being pleased, openeth his  
mouth wide, to be thus cleansed by this Bird, and so falling fast asleep gaping, watched all the while  
by the vigilant eye of the Ichneumon, perceiving him to be deeply plunged in a senseless security,  
goeth presently and walloweth in sand and dirt, and with a singular confidence entereth into the gate  
of death, that is, the Crocodiles mouth, and suddenly pierceth like an Arrow through the Monsters  
wide throat down into his belly.

The Crocodile feeling his unlooked for evil, awaketh out of sleep, and in a rage or madness, void  
of counsel, runneth to and fro, far and wide, plunging himself into the bottom of the river, where  
finding no ease, returneth to land again, and there breatheth out his intolerable poison, beating feeling the  
himself with all his power, striving to be delivered from this unsufferable evil. But the Ichneumon in  
careth not for all this, sitting close upon the liver of the Crocodile, and feeding full sweetly upon  
his intrails, until at last being satisfied, eateth out her own passage through the belly of her host.  
The self same thing is related by *Plutarch*: but I wonder for what cause the Beast should rowl her  
self in sand and dirt, to enter into the Crocodiles belly: For first of all, if after her rolling in dirt,  
the dry her self in the Sun, yet will not that hard crust be any sufficient armour of proof to defend  
her small body from the violence of the Crocodiles teeth, and besides, it encreaseth the quantity  
of her body, making her more unfit to slide down through the Crocodiles narrow throat: and  
therefore, the Authors cannot be but deceived in ascribing this quality to her, when she is to enter  
into the Crocodile, but rather I believe, she useth this defence against the Asp, as *Aristotle* saith, and  
therefore the Author seeing her so covered with mud, might easily be mistaken in her purpose. For  
it is true indeed that when the Asp upon the land, she calleth her fellows, who arm  
themselves as before said before the combat, by which means they are safely preserved from the bites with  
bings of their enemies; or if it be true that they wallow themselves in the mud, they do not dry Asps.  
themselves in the Sun, but while their bodies are moist, slide down more easily into the Crocodiles  
belly.

The Croco-  
diles behavior  
feeling the  
Ichneumon in  
her belly.

Concerning their fighting with Asps, and the arming of themselves as aforesaid, the *Egy-  
ptians* make this Hieroglyphick of the Ichneumon, to signify a weak man, that wanteth and cry-  
eth help of others: *Pliny* also saith that when the Asp fighteth with this Beast, the Ichneumon  
turneth to her, her tail, which the Asp taking for defiance, presently maketh force at it, whereby  
she is overtaken and destroyed by the Ichneumon, but in my opinion this combat is better ex-  
pressed by *Oppianus*.

Their com-  
bats with  
bites with  
Asps.

For saith he, the *Ichneumon* covereth her body in the sand, as it were in a grave, leaving nothing uncovered but her long Serpentine tail, and her eyes, and so expecteth her enemy. When the Aspe espyeth her threatening rage, presently turning about her tail, provoketh the *Ichneumon* to combat, and with an open mouth and lofty head doth enter the list, to her own perdition. For the *Ichneumon* being nothing afraid of this great bravado, receiveth the encounter, and taking the head of the Aspe in his mouth, bitteth that off, to prevent the calling out of her poyson: afterwards tearing her whole body in pieces, although gathered together wound in a circle; for the success of these two combatants, lyeth in the first blow. If the Aspe first bite the *Ichneumon*, then doth her poyson destroy her adversary; and so on the contrary, if the *Ichneumon* first bite the Aspe, then is the *Ichneumon* conquerour; and for this cause he covereth her body as aforesaid.

Their enmity to all kinds of Serpents, and their eggs.

Furthermore, this Beast is not only enemy to the Crocodile and Aspe, but also to their Eggs, which the hunteth out by the sagacity of her nose, and so destroyeth them, yet doth she not which the merciful providence of God doth notably appear, for the safeguard of mankind, which in those Countries where these noisome Beasts are bred, hath provided such an enemy to destroy them, both Eggs, and Birds, as is friendly and tameable by the hand and wit of man.

For which cause the blinde Pagans, consecrated this Beast to *Latona*, and *Lucina*; and the *Hæcæopolites* did think that they possessed all religion; the *Egyptians* themselves did worship them, because as their Country is above all other plagued with Serpents, so they are much eased by the help of this little Beast. And when they die, they do not only lament them, but also bury them religiously. And thus much for the description of the *Ichneumon*. Now followeth their medicinal virtues.

#### The Medicines of the Ichneumon.

The skin of the *Ichneumon*, being dried and beaten into small powder, afterwards mingled with Wine Vinegar, and anointed upon those which are grieved with the venomous or poysonfome bites of the same Beast; doth very effectually and speedily cure them of the same. The precious bone called by the name of *Ira*, which is very hard, as *Horus* saith, being burned, and afterward beaten or pounded into powder, is an excellent remedy against the venomous biting of the *Ichneumon*. It is also said, that all Beasts (but especially the Crocodile) do for the most part hate and detest the society of this Beast. There is moreover a very ranck and venomous poyson, which proceedeth from the genital or groin of this Beast.

The hairs of the *Ichneumon* being taken in a certain perfume, doe very much help and cure those which are troubled or grieved with the Maw-worms. The dung of a Cat, or the dung of this Beast, is very medicinable to be put in any salve, or potion, for the strengthening and confirming of the body. The urine or tail of an *Ichneumon*, being mixed with the milk of a black Cow; and given unto those which are troubled with that grievous disease, called the Colick and Stone, for the space of three days together in any kinde of drink, will easily and speedily cure them of their pain. The fumes of an *Ichneumon*, being either beaten in powder, or taken raw, either in Wine or any other drink, is very medicinable, and curable for the easing of all such as are troubled or grieved with any ach, pain, or disease in their belly: And thus much shall suffice concerning the cures, and medicines of the *Ichneumon*.

#### Of the LAMIA.

The significacion of the word *Lamia*.

Visions of Phœnixes.

Philosophers. The Poetical *Lamia*.

Varinus.

This word *Lamia* hath many significacions, being taken sometime for a Beast of *Lybia*, sometimes for a fish, and sometimes for a Spectre or apparition of women called *Phœnixes*. And from hence some have ignorantly affirmed, that either there were no such Beasts at all, or else that it was a compounded monster of a Beast and a Fish, whose opinions I will briefly set down. *Apollonius* affirmeth, that he heard one say, that he saw a great wide Beast having several parts resembling outwardly an Ox, and inwardly a Mule, and a beautiful Woman, which he called afterwards *Phœnix*.

When *Apollonius* and his companions travelled in a bright Moon-shine night, they saw a certain apparition of *Phœnixes*, in *Latine* called *Lamia*, and in *Greek*, *Empusa*, changing themselves from one shape into another, being also sometimes visible, and presently vanishing out of sight again: as soon as they perceived it, he knew what it was, and did rate it with very contumelious and dispitful words, exhorting his fellows to do the like, for that is the best remedie against the invasion of *Phœnixes*. And when his companions did likewise rail at them, presently the vision despaired away.

The Poets say, that *Lamia* was a beautiful woman, the daughter of *Beller* and *Lybie*, which *Jupiter* loved, bringing out of *Lybia* into *Italy*, where he begot upon her many sons, but *Jupiter* jealous of her husband, destroyed them as soon as they were born; punishing *Lamia* also with a restless estate, that she should never be able to sleep; but live night and day in continual mourning, for which occasion she also stealth away and killeth the children of others, whereupon came the fable of changing of children: *Phœnix* having pity upon her, gave her exomphalic eyes that might be taken in and out at her own pleasure, and likewise power to be transformed into what shape she would: And from hence also came the fained name of *Acho*, and *Achæ*, where

wherewithal women were wont to make their children afraid, according to the verses of *Lucretius*.

*Terribilis Lamia, Puerum Pompilius*  
*Infantis Nuda, tremisib, &c.*

Of these *Phœnixes* Polidorus telleth this old wives story, in his preface upon the first book of *Old Wives Tales*; that his Grand-mother told him when he was a child; there were certain *Lamias* in the tails of *Phœnixes*, which like Bog-beasts would eat up crying boys, and that there was a little Well near to *Phœnixes*, being very bright, yet in continual shadow, never seeing Sun, where chole Phœnix women have their habitation, which are to be seen of them which come thither for water, and which



*Phœnix* also affirmeth, that they have exemptible eyes, as aforesaid, and as often as they go from home, they put in their eyes, wandering abroad by habitations, freets, and crofs ways, entering into the assemblies of men, and prying to perfectly into every thing, than nothing can escape them, be it never so well covered: you will think (saith he) that they have the eyes of Kites, for there is no small mote but they espy it, nor any hole so secret but they find it out; and when they come home again, at the very entrance of their house they pull out their eyes, and cast them aside, for being blinde at home; but seeing abroad. If you aske (saith he) what they doe at home, they sitting and making of wool, and then turning his speech to the *Phœnixes*, speaketh in this manner: *Videte vestros Lamias, istas pueri Phœnixes, quas & sua vestunt, alios & aliena spectant? Negatis? Atqui tamen sem in arboris fruticibus: verum personis insistent, homines deorū, Lamias sumus: quæ ita loquuntur: Oye Phœnixes, did you ever see their Phœnixes, which were busied prying into the affairs of other men, but yet ignorant of their own? Do you deny it? yet do there commonly walk up and down the City, Phœnixes in the shapes of men.*

There were two women called *Mucro*, and *Lamia*, which were both foolish and mad, and from the strange behaviours of them, came the first opinion of the *Phœnixes*: there was also an ancient *Lybian* woman called *Lamia*, and the opinion was, that if these *Phœnixes* had not whatsoever they desired, presently they would take away live children; according to the verses of *Hæcæus*, which are

*Nec thodoneque volens, poscit sibi fabula vultu*  
*Nec pueri Lamia vivum puerum extrahat alio,*





Stomach, and courage. These *Lybian* Lions have not half so bright hair as others, their face and neck are very horrible rough, making them to look fearfully, and the whole colour of their bodies be-  
 twist brown and black; *Apollonius* saw Lions also beyond *Nilus*, *Hijabst*, and *Ganges*: and *Strabo* affirmeth that there are Lions about *Meor*, *Astape*, and *Aphabore*, which Lions are very gentle, tame, and fearful, and when the Dog star called *Canis Sirius* doth appear, whereof cometh the Dog days, that then they are drove away by the bitings of great gnats.

*Ethiopia* also breedeth Lions, being black coloured, having great heads, long hair, rough feet, fiery eyes, and their mouth betwixt red and yellow. *Cilicia*, *Armenia*, and *Parthia*, about the mouth of *Illex*, breed many fearful Lions, having great heads, thick and rough necks and cheeks, bright eyes, and eye-lids hanging down to their noses. There are also plenty of Lions in *Arabia*, so that a man cannot travel near the City *Aden* over the mountains, with any security of life, except he have a hundred men in his company. The Lions also of *Hircania* are very bold and hurtful; and have a hundred men in his company. The Lions also of *Hircania* are very bold and hurtful; and have a hundred men in his company. The Lions also of *Hircania* are very bold and hurtful; and have a hundred men in his company.

*Vatommum*. The colour of Lions is generally yellow, for these before spoken of, black, white and red, are exorbitant. Their hair some of them is curled, and some of them long, shaggy and thin, not standing upright, but falling flat, longer before, and shorter behind, and although the curling of hair be a token of sluggish timidity, yet if the hair be long and curled at the top only, it portendeth generous animosity. So also if the hair be hard: for beasts that have soft hair, as the Hart, the Hare, and the Sheep, are timorous, but they which are harder haired, as the Boar and the Lion, are more audacious and fearless.

There is no four footed beast, that hath hairs on his neather eye-lids like a man, but in lead thereof, either their face is rough all over as in a Dog, or else they have a foretop as a Horse and an Ass, or a mane like a Lion. The Lioness hath no mane at all, for it is proper to the male, and as long hairs are an ornament to a Horses mane, so are they to the neck and shoulders of a Lion; neither are they eminent but in their full age, and therefore *Pliny* said; *Turtigeros elephantonum miramur lunares, lonum jubas*. We wonder at the Tower-bearing shoulders of Elephants, and the long hanging manes of Lions. And *Ælian*us *Rationis experitibus mari præstantiam, quandam naturæ largita est, juba Les ostendit, lit fœminam, serpens crispa*. Nature hath honoured the Male, even in creatures without reason, to be distinguished from the female, as the mane of the male Lion, and the comb of the male Serpent do from their females. *Martial* writeth thus of the Lions mane:

*O quantum per colles decus, quem parasti honorem,  
 Aurea lunata cum stetit unda juba!*

The several parts.

A Lion hath a most valiant and strong head, and for this occasion, when the Nymphs were terrified by the Lions and fled into *Carystus*, the Promontory wherein they dwelled was called *Celeus*, that is, the Lions-head, where afterwards was built a goodly City. It fortuned as *Themistocles* went thither to manage the affairs of the *Grecians*, *Epirides* the *Persian*, president of *Phrygia*, intended his destruction, and therefore committed the business unto one *Pisus*, with charge that he should behead *Themistocles*, who came thither to execute that murder; but it happened as *Themistocles* slept at the noon day, he heard a voice crying out unto him, *O Themistocles effuge leonem caput ne iace in leonem incurrit*; that is to say, *O Themistocles* get thee out of the Lions head, lest thou fall into the Lions teeth: whereupon he arose and saved his life.

The face of a Lion is not round as some have imagined, and therefore compared it unto the Sun, because in the compass thereof, the hairs stand out eminent like Sunbeams, but rather it is square figured like as his forehead, which *Aristotle* saith, you may chuse whether you will call it a forehead, or *Epipedon frontis*, that is, the superficies of a forehead; for like a cloud it seemeth to hang over his eyes and nose, and therefore the *Germani* call a man that looketh with such countenance, *Niblen of Nubiler*, to be cloudy, and it betokeneth either anger or sorrow; also it is called *Syphicus aspectus*, because the *Syphians* were always wont to look as though they were ready to fight.

The eyes of a Lion are red, fiery, and hollow, not very round nor long, looking for the most part awry; wherefore the Poets style the Lioness *Torus leana*. The pupils or apples of the eye shine exceedingly, inasmuch as beholding of them, a man would think he looked upon fire.

His upper eye-lid is exceeding great, his Nose thick, and his upper chap doth not hang over the neather, but meet it just: his mouth very great, gaping wide, his lips thin, so that the upper parts fall in the neather, which is a token of his fortitude: his teeth like a Wolves and a Dogs, like saws, losing or changing only his canine teeth, the tongue like a Cats or Leopards, as sharp as a file, wearing through

through the skin of a man by lickings: his neck very stiff, because it consisteth but of one bone without joynts, like as in a Wolfe and an Hyacinth, the flesh is so hard as if it were all a sinew: There are no knuckles or turning joynts in it called *Spondyli*, and therefore he cannot look backward.

The greatness and roughness of his Neck, betokeneth a magnanimous and liberal minde; Nature hath given a short Neck unto the Lion, as unto Bears and Tygers, because they have no need to put it down to the earth to feed like an Ox, but to lift it up to catch their prey. His shoulders and breasts are very strong, as also the forepart of his body, but the members of the hinder part do degenerate. For as *Pliny* saith, *Leoni viri jumenta spectare*, the chiefest force of a Lion is in his breast.

The part above his throat-hole is loose and soft, and his *Metapleuron* or part of his back against his heart (so called) betwixt his shoulder-blades, for sometimes the bringeth more, but because the aboundeth in milk and bee meat (which he getteth seldom) and is for the most part flesh, turneth all into milk. The tail of a Lion is very long; which they shake oftentimes, and by beating their sides therewith, they provoke themselves to fight. The *Griatum* call it *Alorus* and *Alorus* maketh this excellent emblem thereof upon wrath.

*Accepi veteres candem dicens Leonem.*

*Quid simulque huius corporis ille gemit.*

*Lionem quum surgit hinc crudelis, & arat.*

*Telle dolor, furor, acies, et ira, et ira.*

The neather part of his tail is full of hairs and gristles; and some are of opinion, that there is there in a little ring wherewithal the Lion pricketh it self, but of this more afterwards.

The bones of Lions have no marrow in them, or else it is so small that it seemeth nothing; therefore *Ælian*us. fore they are the more strong, solid, and greater than any other beast of their stature, and the males *Aristotle*. have ever more harder bones than the female, for by striking them together you may heare fire, as by the percussion of *Flints*; and the like may be said of other beasts that live upon flesh, yet are some of the bones hollow. The legs of a Lion are very strong and full of Nerves, and in stead of an ankle-bone it hath a crooked thing in his patera, such as children use to make for sport, and so also hath the *Lynx*.

His forefeet have five distinct toes or claws on each foot, and the hinder feet but four. His claws *Pliny*. are crooked, and exceeding hard, and this seemeth a little miracle in nature, that Leopards, Tygers, *Cardan*us? Panthers, and Lions, do hide their claws within their skin when they go or run, that so they might not be dulled, and never pull them forth except when they are to take or devour their prey: also when they are hunted, with their tails they cover their footsteps with earth, that so they may not *Solin*us. be betrayed.

The Epithets of this beast are many, whereby the authors have expressed their several natures, such are these, the curst kind of Lions, full of stomach, sharp, bold, greedy, bluncket, flesh-eater, *Cestien*, *Glenn*, the Lord and King of the beasts and woods, fierce, wilde, hairy, yellow, strong, fretting, teeth-grashing, *Nymau*, thundering, raging, *Gentian*, rough, lowering, or wry-faced, impatient, quick, untamed, free, and mad, according to this saying of the Poet;

*Ferus Præpotentem ingens Leonis*

*Vim stupida, apoplexia, rebus.*

For as the Eagle is fained to feed upon the heart of *Prometheus*; so also is the Lion the ruler of the heart of man, according to the *Astrologians*. And from hence it cometh that a man is said to bear a stomach when he is angry, and that he should be more subject to anger when he is hungry, then when he is full of meat.

These also are the Epithets of Lions, wrathful, *Lybian*, deadly, stout, great, *Mafian*, *Mau-* The *Epithets* of Lions.  
*nian*, *Parthian*, *Phrygian*, *Molochian*, *Carthaginian*, praying, yawning, stubborn, snatching, wrink-

led, cruel, bloody, terrible, swelling, vast, violent, *Marmarian*.  
 These also are the Epithets of the Lioness, *African*, bold, stony-hearted, vengible, cave-dweller, The voice of  
 ing, fierce, yellow, *Gentian*, *Hyrcanian*, ungentile, *Lybian*, snarling, growling, and terrible. By all  
 which the nature of this Beast, and several properties thereof, are compendiously expressed in  
 one word.

The voice of the Lion is, called *Rugitus*, that is, roaring, or howling; according to this Verse of the Poet;

*Tigridis indomita rancens, rugiens, Lemna.*



















can hear both the other at the farther ends: some setting round about in warlike manner, holding pitchy fire-brands in their right hands, and bucklers in their left, for with those they make a very great noise and clamor, and with shewing their fire brands, put the wilde Beasts in an incredible fear: Therefore when all the Horse-men being spread abroad invade the Beasts, and the Foot-men likewise do follow with a great noise: the Lions being terrified with the crying out of the Hunters, not daring to resist, give place: and aswell for fear of fire, as of the men, they run into the nets and are taken: like as fishes in the night time, by fire are compelled and driven into the nets of the fishers.

The third.

The third manner of hunting is done with lesser labour: that is, four strong men armed with shields, and fortified all over with thongs of leather, and having helmets upon their heads, that only their eyes, noses, and lips may appear, with the branding of their fire-brands, rustle in upon the Lion lying in his den: he not bearing this indignation, with a gaping and open wide mouth, the lightning or burning of his eyes being inflamed, breaketh forth into a great roaring; and with such celerity rustleth upon them, as if it were some storm or tempest: they with a firm and constant courage abide that brunt: and in the mean while that he coveteth to catch any of them in his teeth or claws, another of them; provoking him behinde doth smite him, and with a loud noise or clamour, doth vex him: then the Lion in hast leaving the first which he had taken in his mouth, turneth back his mouth unto the hinder: each of them in several parts do ver him, but he breathing forth warlike strength, runneth here and there, this man he leaveth, that he snatcheth up on high: at the length being broken with long labour, and wearied, foaming in his mouth, he lyeth down straight upon the ground, and now being very quiet they blinde him, and take him from the earth as if he were a Ram. I do also finde that Lions are intricated in snares or traps, bound unto some post or pile, nigh unto some narrow place, by which they were wont to pass.

But *Pliny* saith, that in times past it was a very hard and difficult manner to catch Lions; and that the chiefest catching of them was in Ditches.

In the Mountain *Zarnius* in *Africk*, the strongest men do continually hunt Lions, the best of which being taken, they send them unto the King of *Esse*: and the King ordereth his hunting in this manner; in a very spacious field there are little hutches built of that height as a man may stand upright in them: every one of these is shut with a little gate, and within standeth an armed man, the Lion being raised, and forced to that place the dores being open, then the Lion seeing the dores open, runneth with great force, which being shut again, he is provoked to anger: Afterward he bring a Bull, to combat with him, where beginneth a cruel fight, in which, if the Bull kill the Lion, the honour of that day is finished; but if the Lion overcome him, all the armed men, which in number are almost twelve, come forth to fight against the Lion; some of them having Boar-spears of six cubits long: but if the armed men shall seem to overcome the Lion, the King commandeth the number to be diminished, and if on the contrary, the armed men be overcome, the King with his Nobles sitting in an high place to see the hunting kill the Lion with Crofs-bows; but it cometh oftentimes to pass, that every one of them is slain before the Lion.

The reward of those which combat with the Lion, is ten golden Crowns, together with a new garment: neither are any admitted unto this fight, except they are of a most pregnant and valorous strength, and born in the Mountain *Zalag*, but those which do first of all provoke and give on to the Lions, are born in the Mountain *Zarnius*.

To conclude this discourse of the hunting of Lions: If it fortune that he be followed with men and Dogs, yet in the plain fields he never mendeth his pace, as some writers affirm, oftentimes turning about, and looking upon his pursuers, as it were to dare their approachment, and to give defiance unto all their pretences: yet having gotten the thickets, he looketh to himself, and with his best celerity and speed, so wisely tempering his fear before his foes, that it may seem a boldness, and so politely when he thinketh no eye seeth him, no longer dissembleth with himself, but runneth away like a fearful Hart, or Hare, laying down his ears, and striking his tail between his legs, like a Cur-dog, seldom times looking behinde him, but most irreverently upon those that come before him, especially if he receive from them any wound; whereunto *Horace* saith:

*Quid ut nocere me intueris,  
Aut ut petita ferro bellus?*

In his course he spareth no Beast that he meeteth, but falleth upon it like a mad Dog, (except Swine) for he is afraid of their bristles; and if a man do not attempt to wound him, he will snatch him, and overthrow him, but do him little harm; according to these verses of *Ovid*:

*Corpora magnanimum sat est prostrasse Leonem:  
Engne summi finitrum cum iace hostis: habet.*

He observeth most vigilantly the band that woundeth him, and laboureth to take revenge for the evil turn, and so is revenged in his mind, till opportunity send him his adversaries beid: as may appear by this story following.

When *Juba King of Moori* (the Father of him which when he was a childe was brought in triumph) travelled through the Wilderness with an Army of souldiers, to repress certain rebels in one part of his Dominion, which had shaken off his government, and to settle them again in their first allegiance. There was a noble young Souldier in his Train, of the race of the Nobility, and not only very strong, but also well experienced in hunting, and by the way he with other of his fellows met with a Lion, at whom he presently cast a Dart, and gave him a fore wound, but not mortal: after the wound received, the Lion went away guilty of his hurt, and the young men did not prosecute him, but went forward on their journey: After a whole year, the King returned homeward the same way, and his company that he carried with him, among whom was this young gallant that wounded the Lion: The Lion having recovered his hurt, and having his Den near the way and place of his harm, perceiving a return of the Army, went furiously among them, and found out the man whose hand had wounded him, and could not by any help of his associates be stayed from a revenge, but tore the young souldier in pieces, and departed away fast, for the residue seeing his rage, ran all away, thinking him to be some Devil in the likeness of a Lion.

After the taking of Lions, it followeth that we should intreat of their taming, and first of all, they which are tamed in their infancy while they are whelps, are most meek and gentle, full of sport and play, especially being filled with meat; so that without danger, a stranger may meet with them: but being hungry, they return again to their own nature, for as it is true (which *Seneca* saith) *Levibus manus magister infertit, sculatur Tigrim suum celsus*, that is to say, The Master of a Lion may put his hand in his mouth, and the Keeper of a Tyger may kiss him, yet is it also to be feared, *Tigres Leness: nunquam feritatem exuunt, aliquando submittunt, et cum minime expectant, turpia maligna redibit*. Lions and Tygers do never leave off their wildness, although sometimes they yield, and seem to be submiss, yet upon a sudden when a man expecteth not, their malignant wrath breaketh forth, and they are exasperated.

Wherefore after they grow to be old, it is impossible to make them utterly tame; yet we read in divers stories of tame Lions, whether made so from their littering, or else constrained by the Art of man, such are these which follow; *Hanno* had a certain Lion, which in his expeditions of war carried his baggage, and for that cause the *Carthaginians* condemned him to banishment, for said they, *Male eredi libertas ei, cui in tantum cessit etiam feritas*. It is not safe to trust such a man with the government of the Common-wealth, who by wit, policy, or strength, was able to overcome, and utterly to alter the wilde nature of a Lion: for they thought he would prove a Tyrant, that could bring the Lion to such meekness, as to wait on him at Table, to lick his face with his tongue, to smooth his hand on his back, and to live in his presence like a little Dog.

The Indians tame Lions and Elephants, and set them to plough. *Onomacritus* the Tyrant of *Cattana*, had Lions with whom he did ordinarily converse. In the Countrey of *Elym* there was a Temple of *Adonis*, wherein were kept many tame Lions which were so far from wildness, and fierceness, that they would embrace and salute the people that came in there to offer: Also if any one called them to give them meat, they would take it gently, and depart from them with quietness. Likewise in the Kingdom of *Fes*, in a plain called *Adejen*, there are certain Forrests wherein live tame and gentle Lions, which if a man meet, he may drive away with a small stick or wand without receiving any harm. And in another region of *Africk*, the Lions are so tame, that they come daily into Cities, and go from one street to another, gathering and eating bones; from whose presence neither women nor children run away. Likewise in many parts of *India*, they have Lions so tame, that they lead them up and down in leams, and accustom them to the hunting of Boars, Bulls, and wilde Asles, like Dogs; for their noses are as well fitted for that purpose, as the best Hounds; as we have shewed before of the King of *Tary*.

And the best means of taming them is the rule of *Apollonius*, which he said was the precept of *Pharoer*, which is, that they be neither handled too roughly, nor too mildly, for if they be beaten with stripes, they grow over stubborn; and if they be kept in continual flatteries, and used over kindly, they grow over proud: For they held opinion, that by an equal commixtion, of threatening, and the speaking, or gentle usage, by which means they are more easily brought to good desired conditions; and this wisdom the Ancients did not only use in the taming of Lions, but also in restraining of Tyrants, putting it as a bridle to their mouths, and a hook in their nostrils, to restrain them from fury and madness.

*Alanus* saith, that the best way to tame Lions, is to bring up with them a little Dog, and oftentimes to beat the same Dog in their presence, by which discipline the Lion is made more tractable to the will of his Keeper. It is said of *Helicababul*, that he nourished many tame Lions, and Tygers, and other such noisome beasts, calling himself their great mother; and when he had made any of his friends drunk in the night time, he shut them up together (who quickly fell asleep) through the benevolence of their heads: who being so asleep, he turned in amongst them some of his foster-children, both Lions, Bears, Tygers, and such like: at whose presence in the morning, his drunken friends grew so amazed, that oftentimes, some of them fell dead for fear: and to conclude, there is a story in a certain Epigram, of a Lion wandering abroad in the night time, for the avoiding of frost, and cold, came into a fold of Goats: at the sight whereof the Goat-herds were much afraid, calling in question not only the lives of the flock, but also their own, because every one of them, thought himself bound to fight unto death in defence hereof: whereupon

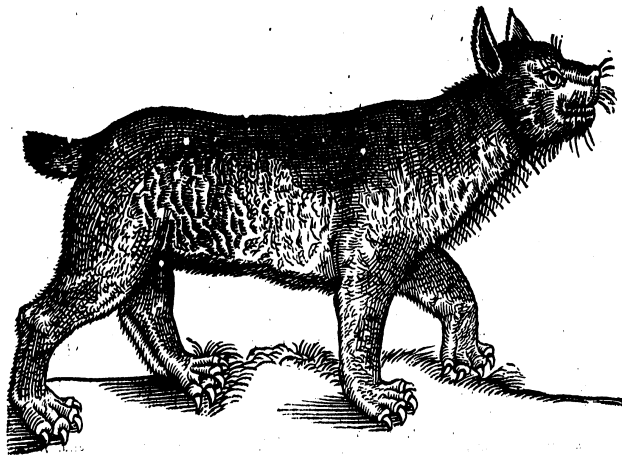




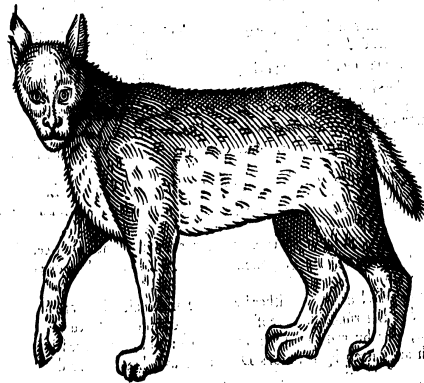




Of the L I N X.



The picture of a Linx once in the Tower of London, which was first described by Doſter Cay.



The names of the Linx.

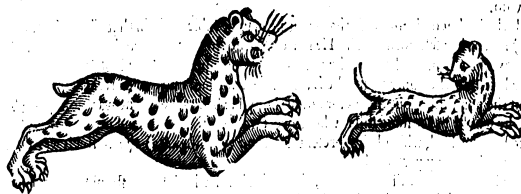
The wilde Beast which among the Germans is named *Luobis*, by making a name from the Linx, or as others write *Lux*, or *Luxus*: amongst the Indians is at this day called *Lupo* which, or *Cervus*, being engendered betwixt a Hinde and a Wolf; and likewise amongst the *Rharians* which speak Italian; and the *Subalians*, and the *Dalmatians* or *Illyrians*, *Cervus*. But there was a certain *Rabennus* of late, which declared that the Linx was he conjectured was called among the *Illyrians*, *Ryri* (And that it was called *Luobis* among the Germans) but that amongst the *Illyrians* was lesser then the other, yet very like. The *Spaniards* do as yet call him by the Latin name *Lince*, even as certain Italian writers in their vulgar tongue, as *Alumnus* doth testify. In certain places in *Helvetia*, and about *Stamus*, they call him *Tbiurwolf*. Amongst the barbarous writers he is called by the name of an *Ounce*; which I do suppose to be a *Panther*. Fr. *Alumnus* doth say, that this Beast was called of certain Italian writers in the vulgar tongue, *Lonxa*, some interpreting it to be a *Lioness*, some a *Pardal*, a *Panther*, or a *Wolf*, engendered of a *Hinde* and a *Wolf*.

Owen

*Ounces* do commonly seem to be called rather *Lince* than *Panthers*; but although some late *Brillians* writers do attribute the name to a *Leopard* or a *lesser Panther*, it seemeth notwithstanding to ebb from the *Linx*: for he is a creature very like him both in his craft and shape of his body, but a *Linx* hath his tail shorter, and his longer. *Liberals* bane doth kill *Leopards* and *Lince*s.

Avicenna.

These Figures were taken by Olaus Magnus, wherein the *Linx* pursueth a wilde Cat.



The Latins call this beast *Lupus Cervarius*, and *Lynx* of the Greek word *Lux*, from whence the *German*, *ein Luchs*; and it hath been believed, that the Latin name was given unto it, because they were engendered betwixt a *Wolf* and *Hind*, but there is no wise man that will suppose or be easily induced to believe, that Beasts of such hostility, and adverse dispositions in nature, should ever engender or suffer copulation together; and therefore I rather suppose that it is called *Cervarius*, either because it hunteth *Harts* and *Hinds*, or else because it imiteth their young ones in the outward colour and spots in the skins.

The shape of the Latin names.

There was a Beast (saith *Pliny*) which was called *Chau*, and by the French, *Raphus*, brought in publick spectacle by *Pompey* the great, out of *France*, which in shape resembled a *Wolf*; and in spots a *Leopard*; and therefore I think that *Chau*, *Raphus*, and *Lupus Cervarius*, are divers names of one and the same wilde Beast, and yet by divers writers it is confounded with the *Ther*, or with the *Panther*, or with the *Ounce*.

But I cannot agree therunto, seeing it is written by *Pliny*, that about the River *Padus* in *Italy*, there are certain Beasts called *Lynxes*, from whence cometh the *Lyncurion*, which by *Zenobius* are called *Lange*, and by others *Languria*. And *Solinus* also agreeth therunto, taking *Lupus Cervarius*, for a kind of *Linx*.

Some have fabled that there is a Beast called *Lyncem*, which *Suidas* and *Varinus* call *Oxundercher*: Two kinds of and they say, that the eyes of it are the best sighted of all the Beasts in the world. *Oplianus* maketh *Lynxes*, two kind of *Lynxes*, one a greater, and hunteth *Harts* and great Beasts; the other a smaller, and hunteth wilde Cats and Hares. And first of all I will set down the description of this Beast, according as it was taken in *England* by that learned Physician *D. Cay*, whose words I do here expresse.

There is in the Tower of London (saith *John Cay*) a Beast which darest fight, his whole body being of the greatness of a Lamb of two months old, having his head, mouth, feet, and nails like to a Cat. But concerning his beard and tail, his beard hangeth down on both sides, divided in the middle with sundry colours, the former being white, and the latter black; his tail is short and thick, being from the middle to the uppermost part red, and to the lower part black; his eyes being yellow, the hair of the eye-lids obscurely waxing white. His ears are erect upright, as the ears of a Cat, being replenished within with white hair, without covered with white and black, but so that the upper part is black, the middle (for it is divided into three parts) be white, and the lower black again. Neither is it content to be ended in his own course, except also that his former parts, or the farthest brinks or edges, and also his latter may be ended on the other side, in like manner as the edges of the Priests hat of the *Grecian* Church are folded against the *Fenians*.

A story of a Linx by D. Cay, taken in England by the sight of this beast in the Tower.

In the top of his ears there are placed some black hairs, as it were a foretop or tuft. The colour of this beast in the outmost parts is red, in the innermost white, but sprinkled here with black spots, and almost by rows, and there with spots somewhat lighter then the other, all his hair being for the most part white all over: all his body, except the aforesaid spots, as it is in certain black skins of young Canies. And on both the sides of his nose there are four spots set in order. In both his lips, as now we will declare: in his uppermost lip there are five orders or rows, being of a very equal distance.

In

In the first row, and the upper, four; in the second, five; in the third, eight; in the fourth, five; in the fifth, there are four; and these also every one in his order, having an equall distance. In the lower lip there are only seven more manifest and evident, being placed in two rows: In the first, four, to the very mouth of the lip; in the second after them three others; after these, other lesser but not placed with so certain and true order as the uppermost.

In the upper lip on both sides there are certain white hairs being rougher then those in Cats and Lions. His nose is somewhat of a pale red colour, being somewhat distinct or apart from the rest of his face on every side with a black line. Another line also doth divide the outermost part of his nose by length (as in an Onice) but only being lightly lead by the top or highest parts, not impressed higher by the lowermost.

The skin of his feet are exceeding hard, and his nails are hid in his feet (as the nails of an Ounce and a Cats are) neither doth he put them forth at any time, unless in taking of his prey as they do.

He doth climb wonderfully, so that what he may be able to do in that thing (either in his cave or den) nature her self doth teach. He is a quick-moving creature, and cannot stand still in a place, so that except (by meer chance) the voice of a Wood-pecker in the basket of a certain Country man (who came then only to see the Lions) had made him quiet and attentive, there had been no hope of the portraiture of his body. He being present he was most quiet; but he going away, he would never stand still: wherefore I was constrained to send my man after the Countryman to buy the bird, which being present, he stood very still until the business was dispatched and the work absolutely perfected.

Our Countrey men call it *Luxarne*, it is doubtful whether we should call it *Lance*, or *Linx*, in the affinity of the words. His skin is used by Noble men, and is sold for a great price. It is angry at none but them which offer him injury; his voice is like a Cats, when he would snatch away the food from his fellow. He is loving and gentle unto his keeper, and not cruel unto any man. *See for Doctor Cay.*

Another description taken by the sight of a skin.

Unto this description of Doctor *Caius*, I may add another description that was taken by the sight of the skin of this Beast. The length whereof from the tip of the nose unto the very tail, was four spans and five fingers, and the length of the tail seven fingers, the breadth of the shoulder-blades of his back, and the top of his neck, was two palmes six fingers and a span; the length of his forelegs, a span and five fingers; and the length of his hinder-legs, a span and three fingers; the hair was very soft, but yet thick and deep, the tips of the hair upon his back were white, but in the nethermost parts they were red, and they are most white which fall downwards on both sides from the middle of his back.

In the middle they are more red and duskie, the middle of the belly, and especially the lower part is white, but both sides of it are white and red, and every where upon his belly there are black spots, but most plentiful in the bottom of the belly, and on both sides. The uppermost part of his neck, right over against his ears, hath great black spots, his ears are small, and not bigger then a little Triangle, in the edges they are black, although with the black hairs there are mingled some white. His beard is mixed with black and white hair, which hair is great like to bristles. The teeth are most white, and the upper canine teeth hang over the nether the breadth of a finger, whereof six are small, and of those six two are the greatest, and all the residue are very small on the nether chap; and to conclude, all the teeth were like a common Weasils or Martil. His feet were very rough, being five distinct claws upon the fore-feet, and four upon the hinder, which claws were very white and sharp.

The price of a Linx skin, Countrey of Linx.

The tail was of equall bigness and thickness, but in the tip thereof it is black. These skins are sold for three Nobles a piece, and sometimes for six, and sometimes for less, according to the quantity of the skin and Countrey wherein it is sold. And unto this description do *Bellinius* and *Bonarius* agree. For *Bellinius* at *Constantinople* saw two *Linxes*, much like unto Cats; and *Bonarius* had oftentimes seen them hunted in *Moschovia*, *Lithuania*, *Polonia*, *Hungaria*, and *Germany*; but he commendeth above all the *Linxes* of *Scotland* and *Swesetia*, as most beautiful, having Triangular spots upon their skins. But the *Indian* and *African* *Linxes*, he saith have round spots, sharp-bristly short hair, and full of spots on all parts of their body, and therefore they are not so delicate as the *Linxes* of *Europe*, which with good cause he conjectureth to be the *Linx* that *Pliny* speaketh of, and not unlike to that which is bred in *Italy*. There are *Linxes* in divers Countreys, as in the forenamed *Russia*, *Lithuania*, *Polonia*, *Hungary*, *Germany*, *Scotland*, so also they are most abundant in *Scandinavia*, in *Swedia*, so also about *Hjellva*, and *Helsingia*: likewise in all the Regions upon the *Alpes*, and in *Sylva Martia*, they are also very plentiful in *Etiopia*, in *France* and *Italy*, about the River *Padus*, and in the Island *Cyprius*. And thus having discoursed of their Countrey and proportion, whereby their difference and kind may be discerned, we will leave every one of them to their particular, and proceed to the treatise and description of their general natures.

Their outward shape and several parts.

There is no great difference betwixt their outward shapes and proportion, for both the smaller and the greater have bright eyes, divers coloured skins, a little head, a nimble and chearful face and (*Albericus* saith) that their body is longer then the body of a Wolf, but their legs shorter, mistaking the *Linx* for the *Ther*. Their eyes stand forth of their heads very far, their tongue like the tongue of a Serpent, and *Textor* affirmeth that they have paps or udders in their Breasts, but surely he taketh *Linx* for *Sphinx*.

There

Their meat goeth into the belly straight through the maw, without staying, and therein is a note of their insatiable voracity, for none but insatiable Beasts or Birds are so affected, as in *Birds*, the *Comment*. It hath no ankle bone, but a thing like unto it; the nails are very long, as you may see in two of the former pictures, but he hideth them within his skin till he be angry, ready to fight or climb, or otherwise affected, as you may see by the picture of the *Linx* taken in the Tower of *London*.

The inward proportion and anatomy of their bodies is like unto a man, and therefore *Galen* giveth this lesson to Students in *Physick*, *Præstat similitudinem homini quam similitudinem artus diff. cum te in exemplo exercere institues, sin ea non detur, aliquem ad prosternam deligito, aut si nulla omnino Similia reperitur, Cyncephalum, vel Satyrum, vel Linxem, summam in ea omnia, quibus artuum extrema in digitos quies; differe fac;* that is to say, It is good to dissect those bodies which are likelest to a man, when one would instruct himself in Anatomy, and if he cannot finde an *Ape*, let him take a *Baboon*, a *Saty*, or a *Linx*, and generally any creature, the extremity of whose sinews and joynts are divided into five fingers or toes.

There be some that have thought, that *Panthers*, *Pardals*, *Linxes*, or *Tyggers*, had been all of the kinde of Cats, because of mutual resemblance in the greatness and strength of their nails, in the distinction of their skins, which are partly coloured and white, having also a round head, a short face, a long tail, a nimble body, a wild mind, and get their meat by hunting; but herein I leave every man to this own best liking and opinion: for when we have done our best to expresse their natures and several properties, it shall be idle to spend time about disputation to what rank or order every beast ought to be referred. For every one that readeth our story, and seeth our pictures may either be satisfied, or else amend our labour.

The *Linx* therefore biteth most cruelly and deep, and therefore is accounted, *Rapax animal, instar lapi, id est, catulorum*, a Beast as ravening as a Wolf, but more crafty; they get up into trees, and from them leap down upon very great beasts, and destroy them, being enemies both to men and beasts, and at their pleasure, according to necessity, set upon both.

They are taken sometimes in *Germany*, in the Dutchy of *Wirttemberg*, and that it was once credibly affirmed, one of them leaped down from a tree upon a Country man, as he passed under the same tree, but being weary, and having an Ax on his neck, received her on the sharp edge thereof, and so killed her, otherwise she would soon have killed him.

They live in the mountains also, where they are killed by poison, or else hunted by armed men on Horse-back, and included with multitudes, for their hunting is perilous, and therefore they must be inclosed with great company. Some take them with ditches, as we heard before *Lions* were taken; others in snares or gins laid upon the rocks, and stones, and whensoever they are hunted with Dogs, they run directly to the woods or to the next trees, wherein they are killed by gun shot.

In the Summer time they are very weak and live among the Rocks, never straying far from their own lodging, hunting no man until the Autumn. They hunt wilde Goats, whom they follow from Rock to Rock, leaping as fast or faster then the Goats. They hunt also wilde Cats and Hares, and some other little Beasts; but the greatest *Linxes* hunt Harts and Affes, and their manner is, as we have said already, to get up into trees, and there to lie in wait for their prey, until they espy it under the boughs, and then suddenly leap into the neck thereof, whether it be a Man or a great Beast, wherein they fix their claws so fast, that no violence can shake them off, but with the sharpness of their teeth, bite into the skull, and eat out the brains, to the utter destruction of the Man or Beast, whomsoever they light upon, but if it be a small Beast, they eat the whole body thereof, and not only the brains.

Yet this is a wonderful secret in their nature, that although they be long afflicted with hunger yet when they eat their meat, if they hear any noise, or any other chance cause them to turn about from their meat, out of the sight of it, they forget their prey notwithstanding their hunger, and go to seek another booty, never remembering that which they had before them, nor yet return back again to eat thereof. The voice of this Beast is called by a special word in *Latin*, *Oreare*, or *Cocare*, which I may *English* Croaking, or Whining, for the voice thereof is not great, and therefore the Author of *Philomela* saith, *Dum Linx ululando fremunt, prorsus sensus uocat*: While the *Linx* croaketh, the wilde bear whineeth. And *Athanasius* saith, *Cordate vox lapi Canavil*: to croak is the voice of a *Linx*.

It is thought that of all Beasts they see most brightly, for the Poets saign, that their eye sight pierceth through every solid body, although it be as thick as a wall; yet if you offer unto it any thing which is transparen, it is much offended, and sometimes blinded, but I cannot tell, whether the sight be attributed to the *Linx* truly according to nature, or fabulously in imitation of the Poetical fiction of *Lyncæus*, of whom it was said in ancient time, that he saw through stone walls, of whom *Hæc* writeth thus:

*Si possit oculis, quantum contendere Lynceus,  
Non tamen ita cito contendere lippus inani.*

*Marcus Tullius* also saith in this manner, in the admiration of *Lyncæus* eye-sight, as though darkness *Orpheus* did not hinder it, *Quis est tam Lynceus qui in tantis tenebris nihil offendet?* *Apollonius* saith, that so great

The actions and dispositions of *Linxes*, *Stomachus*.

Their meat of food.

*Olani* Mag.

A singular note of forgetfulness. *Pliny*, *Solinus*.

The voice of *Linxes*.

The sight of *Linxes*.





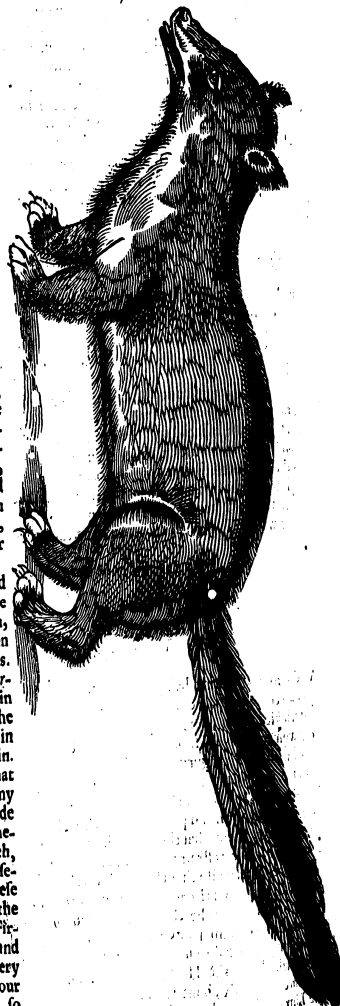
## Of the Marder, Martel, or Marsen.

The several names.

This beast is called in the Hebrew *Oach*, or as some say *Zim*; amongst the *Arabians*, *Eafloz*, or rather *Kachobon*, or *Kachibon*; in *Latine*, *Martes*; the *German*, *Märder*, or *Marter*, like the *English*; the *Italian*, *Marta*, *Martore*, or *Martorella*; the *French*, *Mardre*, or *Foyte*; the *Spaniards*, *Marta*; the *Illyrians* and *Polonians*, *Kuna*; and some latter *Latines* use the words *Marta*, *Martarus*, *Marturus*, and *Marturellus*; and the reason, or etymology of this *Latine* word is taken from *Martia*, in which is signified *Martia*, because this beast in warlike and hostile manner, destroyeth her adversaries, and liveth upon the prey of Hens, Birds, and Mice. The *German* divide these into two kinds, which they call by the names of *Tachmarder*, *Hufmarder*, *Steinmarder*, *Buchmarder*, *Feldmarder*, *Wildmarder*, *Thaumarder*, *Flechmarder*, that is to say, the *Fir-martin*, the *Rock-martin*, the *Tame-martin*, the *Beech-martin*, the *Field-martin*, the *Wilde-martin*, and the *Wall-martin*. For they live either in houses, walls, and Temples, or else in rocks, fields, and woods: And yet is not their distinction taken only from the places of their abode, but also from the goodness of their skins.

And therefore the *French* call the word *Martin* by the name of *Faines*: And the skins of the *Fir-martin*, or *Houfe-martin*, are far more beautiful to look upon, than those that live wild in the trees or Woods. *Agricola* calleth the *Wood-martin* *Baummarder*, because it liveth for the most part in trees, and faith that it never forsaketh the Woods, or very seldom, and therefore in that thing differeth from the *Fir-martin*. But herein he seemeth to be deceived, that he ascribeth to the *Beech-martin*, a loamy or red throat, and also a continual abode among the Woods. For they come sometimes to houses, and to Rocks; for which, as we have said already, it is called a *Houfe-marder*, and *Rock-marder*. And all these multitude of names, do but express the two kinds afore-named, whereof the *Fir-Martin* is most excellent; for Princes and great Nobles are clothed therewith, every skin being worth a *French crown*, or four shillings at the least. And they are so much the better, when there are more white hairs aspered among the yellow.

For their ordinary colour is a deep brown yellow, and these that are clean white, are four times worse than the former; and therefore are not sold for above three or four groats a piece, howsoever the saying of *Martial*, *Penam capta Martis superbus aest*. Here cometh the proud Hunter that hath killed a *Martin*, may very well be applied unto them which take any of these beasts, for they cannot chuse but be very joyful, which get a good sum of money for a little labour, as they have for a *Martins skin*. By inspection of the *Fains*, that is, the *Martins* of the beech; for *French* men called a *Beech-Fair*, from whence cometh the word *Faine*, you may see, that their skins are more dusky, having a tail both greater and blacker than the *Martins* of the *Fir*. And therefore you must understand, that they of the *Firs* are by way of excellency called *Martins*.



Two kinds of Martins.

Places of their abode.

The use of their skins, and how to chuse the best.

Difference betwixt *Faines* and *Martins*.

and the other of the woods called *Faines*. There is no great difference betwixt their bigness; and if by their skins at any time there seem any inequality, in breadth, or length, it must be attributed to their age and difference of years, and not to any proportion in nature or distinction of kind. And as we have said that the *Fir-Martins* are absolutely the best, yet that is not to be understood generally. For the *Martins* of *Polonia* are so brown, that they are altogether disliked, and are accounted no better than the common *Beech-Martins*. Wherefore the bright-brown aspered with white hairs is ever accounted more precious without all exception, and by that colour upon the back of the skin, the skinner judgeth of the worth, and not by the yellowness of the throat.

Of these *Beech-Martins* there are great plenty in the *Alpes*, especially on the South-side, which look towards *Italy*, but very few of the *Wall-Martins*. But on those parts of the *Alpes*, which look towards *Germany* and the *North*, there are abundance of *Fir-Martins* with yellow throats, for you must remember that the *Wall-Martin* hath a white throat, and the *Fir-Martin* a yellow throat.

There are also of both kinds in *Polonia*, and the most excellent are in the vales towards *Eraf Stella*, the *Alpes*. In *France* there are no *Martins* of the wall, but the *Beech-Martins* live in hollow beeches. There are also woods full of the Beasts in *Bruffa*, which the people there call *Geyn*. *Lauzeracca* a wood of *Scandavia* fourscore miles long, is full of *Martins*. Also *Muscovy*, and *Lithuania* have store of these Beasts, and *Sabels*. But they of *Lithuania*, are the whitest in the world.

The people of *Sarmatia* in *Europe*, wear garments of these in *Sables*; and the inhabitants of *Bohemus*, *Sybia*, *Hungaria*, neer *Tanis*, do pay yearly unto the Emperor of *Russia*, once called the Duke of *Muscovia*, a certain number of *Sabels* and *Martins* skins. There are also store of *Martins* neer *Bregans*, and generally in all parts of *Europe* except in *England*.

They are in quantity about the bigness of a *Car*, having longer bodies, but shorter legs, Their gait with heads and tails like a *Fox*, their skins ordinarily brown, white on the throat, and more yellow on the back.

Their teeth are exceeding white, and unequal, one longer than another, being above measure sharp, and the canine teeth both above and beneath hang out very long. Amongst which on the neither chap, stand six small cutting teeth in a right line over against one another, which I think happeneth not in any other Beast of the world. The grinding teeth are like a saw, being triangular in fashion, eight above and eight beneath. Whereof the furthestmost upon the uppermost side of the mouth, are more deep and inward in the palate, then all the residue, the whole number is thirty two. The long hairs upon their upward lip do bend clean back.

Notwithstanding that there be two kinds of this Beast, as already we have said, yet do the *Wood-Martins*, or *Beech-Martins*, greatly desire copulation with the other, wherefore *Albertus* saith, *Miscetur inter se has genera, & Martes phagi, fere sequitur, Martem abiectionem, tanquam abiectionem, ut in utero ea nobiliora aliquid.* The *Beech-Martin* followeth the *Fir-Martin*, and desireth her copulation as the nobler kind, that he may thereby dignify his own issue. It should seem that they breed in *Mares*, and make their nests like the *drakes* of *Squirrels*, and being forth many at a time; For it was constantly affirmed by a Countryman of *Germany*, that he found a nest of these *Martins* builded like a *Squirrel*, having four young ones in it, in the beginning of *April*.

If they be taken when they are young, both one and other kind grow wonderful tame, and familiar with Men and Dogs; And *Geiser* had one of these, which loved a little Dog wonderfully, and would follow him about whithersoever he went, as he would also play with Dogs and Men, with teeth and nails, lying flat upon the back like a *Cat*, and never give any little hurt. But loosed from his chain it would wander abroad into the neighbours houses, and many times far off, but always returne home again. They will tame them, because that they are easily exasperated, and bite deeply when they are angry, do break off the tops of their canine teeth, with a pair of pincers, for the preventing of that mischief; And in consequence, that the violence of the Beast is much like a *Mask*, and faith that the reason of this is because they feed upon sweet fruits; but we have heard that they eat Pullen-birds, Eggs, and Kings of the chips they feed on fruit, it doth not be proved. Their attributes is unto their own nature, of old adells *Martins* are smelted twenty after his art, so may this *Martin* be used for a variety of uses. To conclude, the skins of these beasts are applied to golden legs, and the white hairs of the throat could be used for a variety of uses, for the head-ache. They may be bagged with Dogs, or in traps, but commonly they are taken in ditches or pitfalls, according to the saying of *Columella*, where he saith, *I will comend to you a way to catch Martes, which is to dig a ditch, and to lay a trap in it, and to set a bait in it, and to catch the Martes in it.*

Their food.

The taming of Martins.











nimbly pull them forth when they think they are most secure. Foxes also kill Mice; and in Italy there is a black Snake called *Carbonaria*, from his colour, resembling coals, which I think to be the same that the Grecians call *Myogri*, from his hunting of Mice : This Snake d.c.h. also eat and devour your Mice. Hawks eat Mice, and all the night-birds, especially the night-crows and Owls. How hateful a Mouse is to the Elephant, we have shewed already in that story, how in the presence thereof he will not touch his meat, nor eat any thing over which a Mouse doth run. Nor yet can he see if he will not touch his meat, nor eat any thing over which a Mouse doth run. Nor yet can he see if he will not touch his meat, nor eat any thing over which a Mouse doth run. Nor yet can he see if he will not touch his meat, nor eat any thing over which a Mouse doth run.

Mice and Serpents, for sometimes they play together.

Black Rovers, and Mice, as may appear by *Ambrosius*, *Musen*, and others.

There is a hatred betwixt Bats, Frogs, and Mice, as may appear by *Anthologia*, *Mufum*, and others. It is said also that they are hateful to Oyfters, whereof I know no reason, except it becaufe they love the fish. And *Alcidia* hath a pretty emblem, which he intituleth *Capitulum ob galem*, wherein he sheweth, that a Moufe watcheth an Oyfter when he gapeth, and seeing it open, thrusts in his head to eat the fish: as soon as ever the Oyfter lett his teeth, presently he cloeth his shell again, and so de-croseth the Moufes head in pieces, whereby he deciphereth the condition of those men which de-croseth the Moufes head in pieces. And thus much for the love and enmity betwixt Mice and other Beasts.

Now concerning the actions of men, they hunt Mice to berid from their annoyances, because they do not only destroy the things they eat, and live upon other mens coit; and therefore Parthey do not only destroy unto them whom the German call *Schmutterzer*, and *Tellericker*, that is, smell-fests, and lick-spickets, are compared to Mice, because they live at other mens tables. But also Mice defile and corrupt, and make unprofitable whatsoever they taste; and therefore the Egyptian when they would describe corruption, do picture a Mouse.

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Mice are multiplied by many devices, snares, and gins, the general whereof is cal-

For these causes have men invented many devices, snares, and gins, the general whereof is called by the Latines, *Mulpula*; and by the Grecians, *Mulpala*, and *Myagra*, the divers and several names whereof I will not disdain to let down. For the wise Reader must consider, that it is no reform whereof I will not disdain to let down. For the wise Reader must consider, that it is no cessary, or rather more necessary for most men to know how to take Mice, then how to take Elephants.

And although every woman, and silly Rat-catcher can give instruction enough therein, yet their knowledge cannot excuse my negligence, if I should omit the inventions and devices of the Ancients, whereby they delivered themselves from the annoyances of these beasts. And therefore I will at all declare the manner of catching them in places where corn is kept: Let your Mousetrap be placed to catch Mice, right against the door, but let them have room: to come in, and in short time it will fear them, that they will trouble you no more. But if Mice breed in the ground under crevices, except you fill all the crevices with Mousetraps, you will never catch them, which the Inhabitants of the Island Pandataria are fain to do.

There are other kinds of Moufe-traps which do catch Mice alive: and otherfome which do kill them, either being preffed down with the weight of it, or fluffed with water, or otherwife, as with them, either being preffed down with the weight of it, or fluffed with water, or otherwife, as with a ftrong piece of Iron being fmall, and hung right againft the button of the trap, on the which piece of Iron they hang meat, and fo by that means the Moufe is caught by putting her head through the hole to fearch at the meat; for fhe by flirring the Iron doth loofen the button, and fo her head is fhut faft in the hole. And there are other kinds of Moufe-traps which are covered all over, into the which the Moufe may run, and if you have put any water therein they are greatly flilled. Of all which kinds of traps fhall be feveral traced: And firft of all thofe which do catch Mice alive, which are of three kinds, to wit, of long, and four-cornered, and is framed

The common kinde of this Moule-trap is made of wood, long, and four-corne-wie, and is framed of four boards, but the hinder part is strengthened with strong wiers of Iron, that the may without danger look in to see what she may get there; and that the smell of that which the findeth there, may allure her to come to it. And the former part hath a hole in the top, through which there is put a small piece of Iron; and also there is made a trap-door in form of a Percussio, to the which the Iron is very slightly hung, that when the Moule cometh to catch at the meat, she is suddenly taken by falling of the fame; but the meat which you faften to the neather end of this Iron hook must be fat, or the cruft of cheefe or bread; which if it be a little roasted at the fire, it will not be amiss, that the Moule may smell at far off. Some do make thefe kinde of traps double, with one door at one end, and another door at another end. These kinde of Moule-traps *Petrus Crescent.* doth call traps belonging to houfes, which shall be spoken of hereafter.

The other kinde of Moufe-trap is made with Iron hooks hung in the round circle ; in the midst of the which brim is put a great many of the fame wiers, which being made sharpe at every end, are after the forme of the top of a crell, or helmet, or as it is made in a bow-net to catch fishes ; and upon the hook let there be hung meat, by which means the Moufe coming to the meat, sticketh therself upon the hooks. The manner of making lesser Moufe-traps is with Walnut-tree, and that the middle part of it be not covered, and that there be put to the mouth or brim thereof some kinde of mettel, so that the open part may bend inward, and that the Moufe may not gnaw that which is within, except he creepeth under : which if he shall do, the shall presently be shut in by flying the trap.

*Creeper.* ¶ Also there is another kinde of Mouſe-trap which is covered with the bark of a tree, which is cut into equal pieces, and laid croſs one over another; but there is tied a Swines ſkin in the middle, and alſo an earthen pot covered with the ſame bark, being firſt ſprinkled with corn, that the Mice may cuſtom to come to it, and being dried with lying, they break in pieces, but you muſt lay them together

together again, and fill your pot with water, by the which means as soon as ever they are upon the  
same, they fall into the pit, and so are stifled.

And also it is reported of those which have tryed the fame, that if Mice fall into a vessel without water, and remain there a long time without meat, that then they devour one another, but if they remain there so long until one among them all be left alone, that is to say, the strongest of them all, and that he be suffered to go our, wherefore he shall finde any Mice he will eat them up, and they shall have much ado to escape him, because he hath been so long accustomed unto them. I was told also of a certain friend of mine, that a man of *Senensis* did set a purle in a hollow place, and made it to open and shut by some devise, so that at length he took a Moufe, which Moufe he fed only with the flesh of Mice, and after he had fed it so a long time, he let it go, who killed all the Mice he did meet, and was not satisfied with them, but went into every hole that he could finde, and eat them up also. Also Mice are taken in vessels, from whence they cannot escape, upon the which vessel let there be put a small staffe, which is so cut in the middle, that the may only hold her self by the meat, and when you have so done, put the kernel of a Nut upon the middle of the staffe, to the which the Moufe coming, doth fall into the vessel with the staffe, and they will be fished if there be any water: but if there be none she will be killed.

And again, he telleth of another manner of catching of Mice, which is as great as the first, and it is after this manner: Take two smooth boards about the length of thy arm, and in breadth half thy arm, but joyne it together, that they may be distant from the lower part in length (some four fingers or little less, with two small spindles or clefts, which must be at every end one, and fasten Paper under them, and put a piece of paste therein, being cut overthwart in the middle, but you must not fasten it nigh the middle, and let it be so bound, that it may easily be lifted up bewixt the spindles, that if by slipping it should be altered, it might be brought again to the same form. But the two spindles (spoken of before, ought to be joynted together in the end above, and beyond them another small spindle to be made, which may hold in the middle a crooked wedge or batten, upon the which may be hanged a piece of Hogs skin, so that one of them may easily be turned up and down with the skin, and put thereunto a little piece of earth or stick, that the Mice may easily come to it: So that how many Mice forever shall come thereto, and to the meat, shall be taken, always by rowling the Paper into his wonted place.

There's another manner also, which is to make a round piece of wood fastened on both sides with Needles, and made so that the hinder part of it weigh heavier then the former, and that it stand an inch higher then the other, and then when you have so placed it; throw some corn thereon, that the Mice may be allured thereto, and tie also a piece of feth upon the former end of it; and so the Moufe going into the middle, by the rowling off the same, slippeth into the kettle which standeth under it, which must be half full of water, the circle presently being as it was before, that very often many Mice are catched in one night by this work; all falling into the kettle. Also there are many Kindes of Mice-traps, where Mice do perish by the weight thereof, and they are made of a small piece of wood made hollow, into the which shall fall down another small piece of wood; but it must be made so, that it may fall weighty to press down the Mice going to the meat, and let the meat be tied to another little small piece of wood, which being touched, the heavy piece doth presently fall down, and so by that means the Moufe is taken.

Our Country men do make a trap which is somewhat like to this, let two pieces of boards be joined together one foot broad, & two foot long, and afterwards let there be put in them a wooden pin, which you must fasten to the lower board; so that it may not touch the uppermost; and you must let it fo, that the former part may easily move backward and forward; but moreover, the former board must be fastened to the hinder, like the fashion of a Gibbet or Gallows, with two pieces of wood standing upright, one being put overthwart, or after the fashion of the *Greek letter*  $\Gamma$ , and it must stand some nine inches high, and as broad as the board will suffer you; and let the meat be hung in the middle of it; but that board which is uppermost, must touch both the ends of the other, and notched according to the breadth, the notch being made after the form of a wedge divided into two parts; and another small piece of wood must be put to that which is uppermost, almost two fingers long, and one finger broad, and let there be put into the lower notch a piece of wood with meat in it; so that it may be slightly fastened to the brim of the uppermost, that the meat being presently touched, the other may the easier fall.

And you may lay a Rone upon the uppermost board, that it may fall the heavier. And there are some also which to the lower board do fasten iron pins, made very sharp, against the which the Meats are driven by the weight of the fall. Furthermore, there is another kinde of trap made to cover them alive, one part of it cut out of a small piece of wood, the length of the palm of thy hand, and the breadth of one finger, and let the other part of it be cut after the form of a wedge: and let this piece of wood be erected like a little pillar, and let the wedge be put into the notch of another piece of wood, which must be made equal with the other; or very little shorter: and this pillar must be so made, that the Moule may not perish before she come to the meat: the wood where the meat must stand, ought to be a span long, and you must fasten the meat about the middle of it, but the former part of it must have a cleft, which must begin a little from the brim, and shall be made almost the length of two fingers, and you must make it with two straight corners, and take away half the breadth of the wood. These three pieces of wood being thus made ready, thou

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thalt





Marcellus.

Myresus.

Sextus.

Galen.

Pliny.

Varro.

Aetius.

Pliny.

Marcellus.

Myresus.

Galen.

Pliny.

Aetius  
demonstrans.

added or mingled, it will take away any filthy vent or strong favour in the mouth. The brains of a Moufe being taken and put or steeped in Wine, and stamped, and beaten small, and anointed upon the brow or fore-head of any one who is troubled with a pain or ach in the head, and he shall soon find ease and remedy. If any man shall but touch or kiss with his mouth the snout or nostrils of a Moufe, and be troubled with the disease called the Rhume, which falleth down and stuffeth the nostrils, he shall in very short space be eased of the same. The Magi or wise men do very much commend this medicine for the expelling of a quartan Ague or Fever, which is thus; To take the snout or snout of a Moufe, as also the very tops of the ears, and bruise them together, and afterwards tie them in a linnen cloth, which hath had Roses or Rose-leaves in the same, and then binde them unto the arms or wrists of him which is so troubled, and they will very effectually and speedily cure and heal him. For the rottenness and deminishing of the teeth, the best remedy is to take a living Moufe, and to take out one of her teeth, whether the greatest or the least it is of great matter, and hang it by the teeth of the party grieved; but first kill the Moufe from whom you had the tooth, and he shall presently have ease and help of his pain. The heart of a living Moufe being taken out, and hanged upon the left arm of any woman, is of such force and power, as it will cause her never to conceive. The laps or fillets of the liver of a Moufe, being beaten small and mingled with four drams of sowre and unpleasant Wine, is an excellent remedy for those which are troubled with quakings in their joints; as also for Fevers and Shaking Agues. A Moufe being cut or parted in the conjunction of the Sun and the Moon, and the liver pulled out and roasted or boiled, and given to one which is troubled with the foresaid disease to eat, will very speedily and without any difficulty or pain cure and heal him of the same. The gall of a Moufe being beaten very small, and steeped or washed in Vinegar, and so poured or distilled into the ears of any one who is deaf or thick of hearing, or hath any ach or pain in the same, is counted for the chiefest, and most singular and chiefest remedy or cure which is used for the same.

The dung or dirt of a Moufe being new made, is very profitable for those which are troubled with the disease called the Sciatia, or Hip-gout, anointed or rubbed upon the same. Moufe-dung being also mingled with Vinegar and Oyl of Roses, and so anointed or spread upon the fore-head or temples of any one who is troubled with the head-ach, will presently ease and help him of the time. The gum called Benzoin being mixed with Wine and Saffron, and Pepper; as also with the dirt or dung of Mice being new made; and mixed with Vinegar, and mingled all in one medicine, and so strained and given to one to drink, which is spare and lean, in some short space or time it will make him grow very fat.

The dung or dirt of a Moufe being mingled with certain other medicines, is very good and wholesome for those which are troubled with Tatters, and dry scabs which over-run the whole Body.

The dung of Mice being mingled with the dust or powder of Frankincense, with a little red Arsenick added therunto, is a very profitable and wholesome medicine for those to use which are troubled with little hard red bunches and swellings arising in divers and several parts of the body. Seven pills being taken out of the dung of a Moufe, and mingled with Vinegar, and anointed upon the fore-head and temples, of those which are grieved therein, will very speedily help and cure him.

The inward parts of earth mixed with Moufe-dung, white Pepper, and Myrrhe, being of each of them half an ounce, and afterwards mingled with Vinegar all together; and so anointed upon the head of any one which is troubled with the Megrim, will very effectually and speedily ease and rid him of the same. The herb called Strumulus beaten together with Moufe-dung, and afterwards mixed with Vinegar, is an excellent remedy against the swellings in the head, or little bunches which arising therein become sores, and are full of matter and filthy corruption. The dung or dirt of Mice being melted, dissolved, and mingled with Vinegar, and then rubbed upon the head of any one who is troubled with the scurf or shakles thereon, in a bath or above, will presently expell and drive them quite away.

The dung of Mice being mingled with Frankincense, and so beaten or tempered together until they come unto the likeness or thickness of Honey, and then anointed upon the legs or feet of any one that is troubled with the Gout, he shall find present help and remedy. The same disease also is very effectually cured by the dung of a Moufe, and burned or scorched Barley mingled together, of each being the same weight or quantity, and afterwards mixed with Vinegar all together, and so spread or anointed upon the diseased parts. There is also another excellent remedy for curing of the foresaid disease, which is thus; To take Cantharides, and bruise them all to pieces, and mingle them with soft oil or liquid Pitch, and also with Nitre, and so anoint or rub them upon the skin being prepared for the purpose; but there must be great care had, that the skin be not rubbed or lanced too far. Afterwards unto the wound so made, there must be taken the heads, galls, and dung of Mice, being mixed with the herb Lingwort, and Pepper; and so beaten all together until they come unto a temperate salve or medicine, and then anointed upon the said wounds, and they will in very short space cure the same.

The hairs and dung of a Moufe, parched or dried by the fire, and anointed upon the eye-lids of any one which are pield or bare, will presently procure hair to grow thereon.

Moufe-dung being dried in the shade is an excellent remedy against the voiding or spitting of blood which floweth from some parts of the body, but especially from the belly. The

same is also very good to stanch the blood which issueth from wounds being new made. White Sceny-seed, and the dung of a Moufe or Hare being put into broth, with the stem or stalk of Fennil, and so boyled together, and afterwards given unto a woman to drink who is delicate of milk in her breasts, will presently and very speedily procure her milk in great abundance.

The dung of Mice being steeped or washed in rain water, doth ease and refresh the swelling of womens dugns in their time of delivery. The dung of a Moufe being given in any drink or liquor to one that is troubled with the disease called the Colick and Stone to drink, will in very short space or time cure him of the same. Moufe-dung being also taken in drink, doth loose the body of either man or woman, how fast soever they be bound. There is an excellent remedy arising from Moufe-dung against the Sciatia, or Hip-gout, which is this: To take nine grains of a Moufe-dung mixed or mingled with half a pint of Wine, and given to the party grieved upon a bench or foot-stool to drink, so that he drink it standing upon that foot only which paineth him, even at the Sun rising; and having so drunk it, let him leap down, and afterwards let him leap three times, and let him do this but three days together, and he shall have present help and remedy of his disease.

Moufe-dung mixed with Frankincense and sweet Wine, and so drunk by any one which is troubled with the Colick and Stone, will presently ease him of the same. But the dung of Mice mingled with Frankincense, Water, and Honey, and so boyled together, and drunk, doth not only drive away the pain of the foresaid disease, but also doth break and quite dissolve the Stone. Moufe-dung also being taken in drink by it self alone, doth dissolve and melt the Stone in the Bladder. The same being also boyled in water, is very good and profitable for those which cannot make water. The same being new made and anointed upon the belly of any one who is troubled with the Colick or Stone, shall find present ease and remedy thereby.

There is yet moreover another excellent medicine proceeding from this dung, whereby the fruit in a womans womb may be brought forth either dead or putrid, without any hurt or prejudice unto the woman, which is thus: First to take Egyptian Salt, Moufe-dung, and Gourd, which are sown in Woods; and afterwards to pour in half a pint of Honey, being half boyled, and to call one dram of Rozen into the Honey, the Gourds, and the Moufe-dung, and beat them well, and thoroughly together, and then rowl them up, and fashion them in the manner of Acorns, and put them to the belly of the party so grieved as often as you shall think it meet and convenient, and in using this some short space or time, you shall see the aforesaid putrid fruit to proceed and issue forth.

Moufe-dung being parched or burned, and mingled with Honey, is very good and medicinable as well for those which are troubled with the swellings in their legs and feet; as also for those whose eye-lids are pilled and bald, to make hair to grow again upon them, being spread or anointed thereupon. The dung of Mice being dried and beaten into small dust or powder, and put into the teeth of any one which are hollow, will presently expel away all pain from them, and also confirm and make the teeth strong. The dust or powder which proceedeth from Moufe-dung, is also very good to cure any disease in the fundament of either man or woman.

The urine of a Moufe is of such strong force, that if it shall but touch any part of a mans body, it will eat unto the very bones. The bitings of Mice are healed by no other means but by green Figs and Garlick being mixed or mingled together, and so anointed theretupon.

## Of the RAT.

There is no doubt that this Beast belongeth also to the rank of Mice, and the name thereof we have shewed already, is common both to the French, Spanish, Italian, and English, and it may seem to be derived from the Greek word *Rattor*, or *Henric*, or *Rifor*, for the Grecians use all those words. And this beast is four times so big as the common Moufe, being of a blackish dusky colour, more white on the belly, having a long head, not much unlike the head of the Martin; short and round ears, a reasonable rough skin, short legs, and long claws, and exceeding great eyes, such as can see very perfectly in the dark night, and move perfectly then by candle light; with their nails they climb up steep and hard walls, their tail is very long, and almost naked, void of hair, by reason whereof it is not unworthily counted venomous; for it seemeth to partake with the nature of Serpents. The quantity of their body is much like a Weevil, and sometime you shall see a Rat exceeding the common stature, which the Germans call *Ratzen* King, the King of Rats, because of his larger and greater body; and they say that the lesser bring him meat, and he lyeth idle. But my opinion is; that as we read of the Dor-mouse, the nourisher, her parent when she is old; so likewise the younger Rats bring food unto the elder, because through their age they are not able to hunt for themselves, and are also grown to a great and unwieldy nature of body. Sometime you shall see white Rats; as was once seen in Germany, taken in the middle of April; having very red eyes standing forth of their head, and a rough and long beard. And as *Alphing* in Germany, about the Temple called the Church of S. Hydris, they abound in greater number than in other places. They do not lie in the earth like Mice, except in the valley of *Isachim*, where for the Summer time they forsake houses, and go into Cony holes, but

The vulgar  
Rat or great  
domestical  
Moufe.  
The quantity  
of Rats and  
their parts.



but in the Winter time they return to the houses again. They are more noysome then the little Moufe, for they live by stealth, and feed upon the same meat that they feed upon, and therefore as they exceed in quantity, so they devour more, and do far more harm. They are killed by the same poysons and meats that the common Mice are killed, except Wolf-bane; for if they eat thereof, they vomit it up again, and are safe. They are also taken in the same traps, but three or four times so big: Their flesh is far more hot and sharp then the flesh of the vulgar Moufe, as we have gathered by the digestion of it, and therefore in operation it is very like that it expelleth and dryeth more then the other.

The excrements are also of the same vertue; and with the dung of Rats the Physicians cure the falling off the hair. And it is said also that when they rage in lust, and follow their copulation, they are more venomous and dangerous then at other times. For if the urine do fall upon the bare place of a man, it maketh the flesh rot unto the bones, neither will it suffer any scab to be made upon the ulcer; and thus much of the vulgar Rat.

### of the WATER-RAT.

Names of Water-Rats. **S**Being there are two kinds of Rats, one of the earth called *Rattus terrestris*, and the other of the water called *Rattus Fluvialis*, of which we are now to entreat, being also called of the Latines, *Mus aquaticus*; by the Germans, *Zwöffermaus*, and *Wasserrat*; by the Italians, *Sorgomogango*; by the French, *Rat d'eau*. This beast hunteth fishes in the Winter, and have certain caves in the water sides, and banks of the Rivers or Ponds: For which occasion it being seen in the waters, deceiveth their expectation which look for the return of it to the land. And this beast hath been forgotten by the Ancients, for they have left

Place of Water-rats abode. of it no description nor story, because it liveth partly in the water, and partly on the land, and therefore he said true, that spake of the habitation and place of abode of this beast, in this sort: *Regis non in fluvio; nec alius aquis magnis, sed parvis tantum vivit atq; herbis omnium stipis, hoc animal frequentissimum vestari audo.* That is to say; That this beast doth not keep in great Waters or Rivers, but in small and little currents and Ponds, where abundance of grass and other weeds do grow on the sides and banks: *Pliny* attributeth that to the Water-rat, which is proper to the Tortoise; for indeed there is some similitude of natures bewixt these beasts, with this exception, that the scumles in this kinde have three visible passages for their excrements, one for their urine, another



another for the dung, and the third for the young ones, that is a peculiar place for the littering of their young ones; and this Water-rat over and beside her common nature with other Rats, doth swim over Rivers, and feed upon herbs; and if at any time she be hunted from her native biding and accustomed lodging, then also she goeth among vulgar and common Rats and Mice, and feedeth upon such as they eat: and (*Belonius* saith) that there are great store of these in *Alpe* and *Strymon*, and that in calm nights when there are no winds, they walk to the shores, & get up upon the banks, eating and gnawing such plants as grow near the waters; and if they hear any noise, they suddenly leap into the waters again. He expresseth also the figure of this Rat, which we have omitted because it resembleth in all parts the common Rat, excepting the snout or beak which is rounder or blunter. Among some of the Ancients also, there is a mention made of this beast, and no more. Therefore *Aristotle* saith in the *Acrolium Lysæ*, which is a City so called, (as *Stephanus* writeth,) where *Melampus* did wash the daughters of *Proetus*, and delivered them from their madnels: There is a certain Fountain, wherein do live Rats of the Earth, (they should say Rats of the Water,) for hereto unto agree both *Pliny* and *Theophrastus*. Likewise in a River of *Cassius*, the ancient Wise-men, which were followers of *Zoroaster*, made great account of the Hedgehog, but hated deadly the Water-rats, and said, that he that could kill most of them, was most dear and acceptable to God. And furthermore they said, that Dogs, Hens, and Hedgehogs, did proceed, and were attended from and by good Angels, and Water-rats by evil. And thus much shall suffice for the discourse of the Rat. The story which ensueth is of strange and less known Mice; and therefore I will distribute them after an alphabetical order, according to their several names.

### Of the ALPINE MOUSE.

The Alpine Moufe taketh her name from the *Alpes*, wherein she is bred, and although there be many other kinds of Mice bred in the *Alpes*, yet this being the principal thereof, receiveth denomination from the Mountains, because they are bred in the very tops of the Mountains, and seldom or never come down to the roots. The *Italians* call it *Marmota*, and *Murmit*, and according to *Mathæus*, *Marmota*; the *Rharians*, *Marmotta*; and in some part of *Italy*, *Varesa* (in France, *Marmotte*; although *Marmot* be also a word among them for a Munkey. The *German*, and especially the *Helvians*, by a corrupt word drawn from a Moufe of the Mountain, *Murmeltier*, and *Murmelte*, and some *Mithelie*, by reason of his sharp whining voycelike a little Dog. In *Latine* it is called also *Empra*, which seemeth to be compounded of *Empra*, and this is the least kinde of Alpine Mice, which is found in all the *German* Regions; of which we will speak in the end of this story. Some take this to be called *Taxus*, amongst whom *Brasilius* is one; yet it hath no property with the Alpine Moufe, except lying in a Cave; for it doth not sleep in the Winter, nor hath no outward resemblance with Mice, neither can have any affinity in disposition or manner of living, and therefore I cannot assent thereto. *Græpidus* & *Almus*, both learned *Italians*, say, that the *Arctomys* are called Alpine Mice, whereunto they are led, because they sleep all the Winter long, like the Alpine Moufe; but we shall shew in their due place, that these belong to the Weasels, and not to the Mice, which living in cold Countries, grow white in the Winter time: the *Hebrew* word is *Saphan*, according to some Authors, and is translated *Arctomys*, but we will shew in due place, that the *Arctomys* is the *Grycet*, or *Gryet* Moufe, and the *Saphan* we have shewed already to be the *Cony*.

The *Alpine* Mice are in the tops of the *Apennine* hills, and none of the Ancients except *Pliny* make mention thereof, and it is doubtful whether he doth describe it or no. For his words are, *Sunt his montibus Alpibus pates & in Ægypto, similitudine, residunt in clunibus & hinc pedibus gradiuntur, priusquam ut manibus stantur*, that is to say, there are Mice in *Ægypt* like to the Alpine Mice; for they fit upon their buttocks, and go with their fore-most two feet, which also they use instead of hands, by which we collect, that they are not the same, but like the Alpine Mice.

The Alpine Moufe is in quantity like a Hare, or at the least betwixt a Hare and a Cony, being more fat, and of a thicker body than a Cat, but shorter legs, in outward appearance most like a Moufe, and therefore it is called an Alpine Moufe. The back of it is very broad, and the hair harder and harsher than a Conies. The colour for the most part is yellow, which in some is more clear, and in others more obscure and brown. Their eyes of a reasonable quantity, standing far out of their heads. Their ears very short like cropt ears. The head like a Hares, and their feet with long nails; his fore-teeth like a Squirrels, two above, and two beneath, but long and sharp like a Cat. The tail is half a cubit long, according to *Stumpsius*, but two palms according to *Africæ*. His legs very short and thick, covered with long deep thick hair, like to the bottom of his belly. The toes of his feet are like a Bears, and his claws long and black, wherewithall he diggeth with his fore-feet his den; he goeth upon his hinder-feet like a Bear, or like an Ape, by jumps, and buttocks. His back is also very fat, although all the other parts of his body be lean; and yet that on his back cannot be said to be fat, but rather like a Cows udder, neither fat nor flesh, and they encrease or grow more in breadth then in length.

*Scaliger* describeth them in this manner, a *Marmot* (saith he, for so he termeth an Alpine Moufe The description in French) is a Beast about the bigness of a Badger, having hair and tail much like it; and after on of the great the Alpine Moufe.

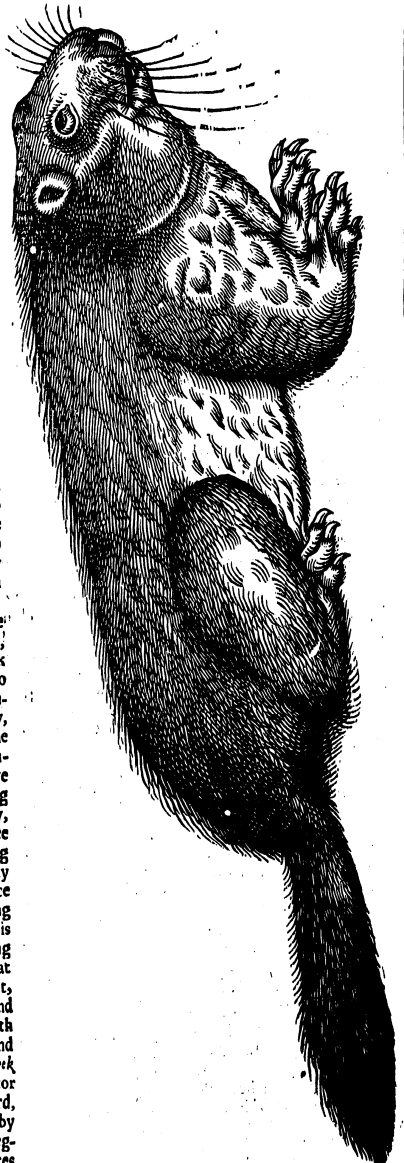
the same manner short legs, and little or no ears, long, sharp, firm, crooked, strong and black claws, which is numbred amongst the kinds of Mice, with whom it holdeth little correspondence, except

that like a Squirrel it taketh his meat in the fore-feet as with hands, and eateth sitting upon his tail. They agree also with the Dor-mouse in their sleep, for they pass over Winter sleeping. Their teeth are like to the teeth of Hares and Mice; after that they are made tame, they are not hurtful to men or children, except they be provoked. Being kept in houses, they will eat and gnaw all linnen and woollen cloth; thus far *Scaliger*. But we have shewed already, that the outward appearance of it is like a Mouse, and that therefore it is safer to follow *Pliny*, *Albertus*, *Mathaeus*, *Stumpsius*, and others, then his sole and singular opinion; they keep as we have said already, in the tops of the Mountains, wherein they make their cave with wonderful art and circumspection, making two different passages into their Den, one above another a poles length, which meet in the middle like a fork, or the conjunction of two Rivers or Path-ways, making the seat of their rest to be very deep in the Mountain, and therein they remain five, seven, nine, or eleven of them together.

Their observation of watch.

They play many times before the mouth of their Den together, and in their sport or pastime, bark like little Dogs. When they go out of their cave into the Mountains to gather food, or to play, or to fetch in grass; always one of them remaineth like a Watch-man near the mouth of the cave upon some high place, looking most diligently and vigilantly, both far and near; and if he see either a man or wilde beast coming towards them, then he suddenly cryeth out, and with his voyce giveth the warning word, whining like the whistling of a pipe, if his fellows be far off; or else barking like a Dog, if they be near at hand. When the residue hear it, they presently repair home, and he which kept the watch, entereth into the Den last of all. And it is reported by a certain *Greek* Writer, that if their speculator do not give them the watch-word, but that they are endangered by any man or beast through his negligence, they tear him in pieces with their teeth. There is no beast so strong as this, considering the quantity; for it hath been seen, that when a lusty young man took one of them by the hinder

*Stumpsius*.  
The strength  
of this Beast.



leg

leg as it ran into the Den, he could not with all his might pluck it back again. The claws of it are exceeding sharp, and fit to dig; so that it is thought if a man finde them in the earth, and seek to take them by digging unto them, he shall labour in vain, because the Beast diggeth faster from him then he can follow; they cannot run very fast in the plain ground, but are easily killed by a man, except they get into the earth: with their teeth they bite deep, for they can sheer asunder wood with them like Beavers, they eat or live upon fruits, and especially being tamed when they are young; they refuse not bread, flesh, fish, or pottage, and above all they desire milk, butter, and cheese; for in the Alps they will break into the little Cottages where milk is kept, and are oftentimes taken in the manner sucking up the milk, for they make a noise in sucking of milk like the pig. In the month of May they are much delighted to eat Hornets, or Horle-flies, also they feed upon wilde Sagapen of the meadows, and feeded Cabbages, and while they are wilde in the Mountains, they never drink; the reason is, as I suppose, because in the Summer time they eat moist green herbs, and in all the Winter time they sleep.

Towards the feast of Saint Michael the Archangel, and of *Gallus*, they enter into their Caves; and as *Pliny* saith, they first of all carry provision of Hay, and green Herbs into their Den to rest upon, wherein their wit and understanding is to be admired; for like Beavers one of them falleth on the back, and the residue load his belly with the carriage, and when they have laid upon him sufficient, he girteth it fast by taking his pail in his mouth, and so the residue draw him to the Cave; but I cannot affirm certainly, whether this be a truth or a falsehood. For there is no reason that leadeth the Author thereunto, but that some of them have been found bald on the back; But this is certain, when the Snow begins to cover the Mountains, then do they enter into their Dens, and shut up close the passages, with sticks, grass, and earth, both so hard and so thick; that it is easier to break the solid ground, then the mouths of their Caves, and so being safely included both from the fear of the Hunters, from rain, snow, and cold, there they live until the Spring, without all manner of meat and drink, gathered round together like a Hedgehog, sleeping continually, and therefore the people inhabiting the Alps have a common proverb, to express a drowsie and sleepy fellow in the German tongue thus; *Er musse sitzen geschlafen haben wie ein marmelbier*; in Latine thus; *Ne cessè habet curam, dormiendo, tempus consumere, insomniis Alpini*. He must needs sleep a little, like the Mouse of the Alps. They sleep also when they are tamed, but it hath been found by experience, that when a tame one hath been taken a sleep, and laid in a warm barrel upon Hay, the mouth being shut and closed to keep out rain and snow, at the opening thereof it was found dead; and the reason was, because it lacked breath, and therefore this is most wonderful, that in the Mountains, notwithstanding the close stopping of the mouth of their Caves, yet they should not be deprived of refrigeration, that is, fresh air, for expiration, and respiration.

But this is to be considered, that after they have been long tamed, they sleep not so much as when they are wilde; for I think that their continual eating of raw and green herbs, ingendereth in them so many humors as cannot be dispersed without a long continuing sleep; but afterwards when they are dieted with such meat as is provided for the nourishment of man, they are eased of the cause, and so the effect ceaseth. During the time that they sleep, they grow very fat, and they are not awaked very easily, except with the heat of the Sun or fire, or a Hot-house. Now the manner of their taking while they are wilde, is thus;

In the Summer time when they go in and out of their Caves, they are taken with snares set at the mouth thereof; but in the Winter time, when they go not abroad, then also are Inhabitants forced to another devise, for then in the Summer time, they set up certain pillars or perches near the mouth of their Den, whereby they may be directed, when the snow doth cover the Mountains. For the pillars or poles stand up above the snow, although the snow be very deep. Then come the Inhabitants upon round pieces of wood in the midst of the Winter, fastned to their shoe-soles over the deep snow with their pyoners and diggers, and cast away the snow from the den, and so dig up the earth, and not only take the beasts, but carry them away sleeping, and while they dig, they diligently observe the frame and manner of the stopping of the Mouses den. For if it be long and deep, if it is a sign of a long and a hard Winter, but if they be shallow and thin, of the contrary: so coming upon them as we have said, they take them and carry them away asleep, finding always an odd number among them; and they diligently observe, that whilst they dig, there be no great noise, or that they bring not their fire too near them. For as *Stumpsius* saith, *Experimentum enim capi non possunt, nisi somno; si enim fodiat venator, ipsi foliando semel & retrocedunt & pedibus quem captum possunt, non movunt; si enim fodiat venator, ipsi foliando semel & retrocedunt & pedibus quem captum possunt, non movunt*. That is to say, If they be once awaked, they can never be taken, for howsoever the Hunter dig never so manfully, yet they together with him, dig inward into the Mountains, and cast the earth backward with their feet to hinder his work.

Being taken as we have said, they grow very tame, and especially in the presence of their keepers, before whom they will play and sport, and take lice out of their heads with their fore-feet like an Ape. Inasmuch as there is no beast that was ever wilde in this part of the world, that becometh so tame and familiar to man as they; yet do they always live in the hatred of Dogs, and oftentimes bite them deeply, having them at any advantage, especially in the presence of men, where the Dogs dare not resist nor defend themselves. When they are wilde, they are also killed asleep by putting of a knife into their throat, whereas their fore-feet stir a little; but they die before they can be awaked.





Of the Accu-  
my.

to be the Beatt called *Arctomys*, thus described by Saint *Jerom*. It is a creature (saith he) abound-  
ing in the Regions of *Palaestina*, dwelling always in the holes of Rocks and Caves of the earth,  
not exceeding the quantity of a Hedgehog, and of a compounded fashion, betwixt a Mouse and  
a Bear.

The voracity  
of the *Arctomys*.

But we have shewed already, that this is the *Alpine* Mouse, and therefore we will not stand to  
confute it here. The name *Arctomys* seems to be derived from the *Arctica* word, which we read in  
*Gelmutus* to be *Skuzerlek*: this Beatt, saith he, is common in the Northern parts of the world, and  
also in other places, in figure and shape it resembleth a Bear, in quantity it never exceedeth a great  
Sorex. It hath a short tail, almost like no tail, it goeth upon two legs, especially when it is moved  
to wrath. It useth the fore-feet in stead of hands, and if it had as much strength, as hath cou-  
rage, it would be as fierce as any Bear. For this little Beatt is so afraid to leap into the Hunt-  
ers face, although it can do no great harm, either with teeth or nails. It is an argument that it is  
exceeding hot, because it is so bold and eager. In the uppermolt, chap it hath long and sharp  
teeth, growing two by two. It hath large and wide cheeks, which they always fill, both carrying  
in, and carrying out, they eat with both, whereupon a devouring fellow, such a one as *Sisyphus*  
servant to *Plautus* was, is called *Arctomys*, a Hamster, because he filleth his mouth well, and is no pinger  
at his meat.

The making  
of his den.

The fore-feet are like a Moulds, so short, but not altogether so broad, with them he diggeth the  
earth, and maketh his holes to his den, but when he diggeth so far as he cannot cast the earth out  
of the hole with them, then he carryeth it forth in his mouth. His Den within he maketh large, to  
receive corn, and provision of fruit for his sustentation, whereinto he diggeth many holes, wind-  
ing and turning every way, that so he may be safe both against Beasts that hunt him, and never be-  
ing killed in his Den: And also if a man dig the earth, he may finde his lodging with more difficulty.  
In the harvest time he carryeth in grain of all sorts, and my Author saith, *Neque minus in offendo*  
*indulgent, quam in eligendo, conservandoque est assiduum, spem enim reponit*. He is no less industrious in the  
gathering of his provision, then crafty and politic in the choice, and keeping it, for it lays up the  
best; and lest that it should rot under the earth, it bite off the fibres and tail of the grain, laying  
up the residue amongst grass and fubble.

It lies gaping over his gathered grain, even as the covetous man is described in the *Satyre* sleep-  
ing upon his money bags. It groweth fat with the like *Dormice*, and *Conies*. The holes into  
the Cave are very narrow, so that with sliding out and in, they wear their hair. The earth which  
cometh out of their holes doth not lie on heaps like Mole-hills, but is dispersed abroad, and that  
is fittest for the multitude of the holes, and all the holes and passages are covered with earth: but  
that hole which for the most part he goeth out at, is known by a foot path, and hath no hinder-  
ance in it, the other places at which the goeth out are more obscure and hid, and the goeth out  
of their backwards. The male and female do both inhabit in one Cave, and their young  
ones being brought forth, they leave their old Den and seek them out some new habitation.  
In the male there is this perfidy, that when they have prepared all their subsistence, and  
brought it in, he doth shut out the female, and suffereth her not to approach night, if she revengeth  
his perfidy with deceit. For going into some adjoining Cave, she doth likewise partake of  
the fruits which were laid up in store by some other secret hole in the Cave, the male never per-  
ceiving it.

So that nature hath wonderfully fore-seen the poverty of all creatures: neither is it otherwise  
amongst men, for that which they cannot do by equity, they perform by fraud. This also cometh  
in the speech of the common people, against one that will thrive. The young Country wench  
concerning this matter, do chaunt out a verse not unworthie, which I am contented to express in lan-  
guage, consisting of foure feet:

*Hamster iste cum  
Prudenti oculis, non  
Stupet profundum plurius  
Per tempus amicum frangitur,  
Postique sicut ut fruit  
Lethæ acervum horridi  
Avarus antro credulam  
Extrahit arte conjugem.  
Servus, inquit, exiens foras,  
Calli serena & pluvialis.  
Sed famulus quis infirmus,  
Vincens dolus astutus?*

*Hamster parvus punctulorum  
Erator oculis, puerilis  
Lenti maribus perfidiam  
Quærit per amicum conjugem,  
Nec se repellat blandulus  
Demulcat iuventutis Junia,  
Ille esse jam communis  
Servatus dum finit bona.  
At perfidus multiplicem  
Oppunit inquit alterum  
Rursum frangitur mutum  
Anxia, obis, amplexibus.*

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At perfidus multiplicem  
Oppunit inquit alterum  
Rursum frangitur mutum  
Anxia, obis, amplexibus.*

His meat and  
food.

This Beatt doth devour all kind of fruit, and if he be nourished in a Mouse he eateth bread and  
fleth: he also hunteth the field Mice: When he taketh his meat, he causeth himself upon his fore-feet:  
he is also wont with his fore-feet to stroke his head, ears, and mouth, which thing the Squirrel as by  
the Cat do also, and as the Beaver amongst those creatures which live as well by water as by  
land: but although in his body he seemeth but small, notwithstanding he is by nature  
apt to fight, and very furious being provoked, with his carriage in his mouth he beareth  
away

away with both his feet that which resisteth him, directly invading his enemy: In the spirit and af-  
fauting of his mouth he is wayward and threatening, from whence our Country men were accustomed  
to say of any one which was angry; he breatheth his wrath out of his mouth like a Hamster: *Du*  
*strestt vut ein Hamster*: neither is he easily affrighted, although he be far unequal unto those in  
strength with whom he is in combat.

Wherefore some do give it in the place of a Proverb, that our Countrymen do call a man which  
is madly rash, *Ein tolen Hamster*, as fool-bardy as a Hamster. He lieth from any one that doth sharply  
relish him, and doth greedily follow after them that flee from him. I myself saw one of these, who  
by assaulting a Horse gat him by the nose, and would never leave his hold until he was killed with a  
sword: He is taken by divers means, for he is expelled either by hot water poured into his den, or  
is choaked within; or being digged up with a mattock or spade he is killed; or by Dogs. He is some-  
times pulled out by the Fox, or hurt: or oppressed by some snare, a great weight being put about it:  
or to conclude, he is taken by Art alive, and that in the night time, when he goeth to seek his prey,  
for in the day time for the most part he lyeth hid.

Of the taking  
of this beatt.

Before his usual Cave (as I have said) he is taken by the path which is worn, by a pot which is put  
into the earth, and afterward made plain about it like other places of the field; there is earth cast  
into the bottom of the pot to the deepness of two fingers, above every where covering the pot  
there is placed a stone, which is held up by a piece of wood, to which there is bound below a fragment  
of bread: In the space between the Cave and the pot there are crums of bread scattered, which he  
following and leaping into the pot, the wood falling, he is taken. Being taken after the manner of  
other beatts, he toucheth no food if a broad stone, such an one which which they cover pavements, or  
of which they make roof tiles, shall be joyned unto the pot, and the beatt be taken, he will be very  
hardly known in the morning: for the spirit of the beatt being shut in, and waxing wrath, piercing  
for thinness doth moisten the stone. The skins of Hamsters are very durable, of which there are cer-  
tain long coats which come down unto the heels, and divers coloured cloaks made, which the women  
of *Misene* and *Silecia* do use, and account them very honorable, of a black and red colour, with  
broad guards of the skins of Otters: the same coats are for the most part valued at the price  
of fifteen or twenty *Romish* crowns: for it doth out-wear in length three or four garments made  
either of linnen or woollen cloth.

The use of  
their skins.

In *Turingia* and *Misena* this beatt is frequent, notwithstanding not in all places, for in *Turingia* his  
chiefest abode is about *Erfordam*, and *Salensis* in *Misena*, about *Lipsia*, and the field *Pegens*, the  
plentifullest and most fertilest places of both those Regions. In *Lulatia* about *Radeburg*, he is dig-  
gout of those places where painick groweth. At *Mulberge* and *Albin*, he is found in the Vineyards,  
for he is also fed with ripe Grapes. Our Country men are wont to burn a living Hamster in a  
pot, being shut, for the medicines of Horses. It hath been seen that one of these hath leaped up  
and caught a Horse by the nose, never letting go his hold until the one was cut off with a sword.  
The skin is of three or four different colours, besides the spotted sides, and therefore the skin is  
very pretious. They abound in *Turingia* where the soil is good, and there is also great store  
of grain.

## Of the NORICIAN MOUSE.

The *Norician* Mouse is called in *Latine*, *Chellus*, and it keepeth like the wilde Mice in the caves  
and dens of the earth. The body is like to a domesticall Weeflis, long and slender, the tail  
very short, the colour of the hair like to a gray Conies, but more bright. It wanteth ears like a  
Mole, but it hath open passages in stead of ears, wherewithal it heareth the sound, as you shall  
see in many birds. The teeth are like the teeth of Mice, and of their skins (although they be not  
very pretious) they use to make garments. In *Germany* they call it *Pile* and *Zyfel*, and of this Ger-  
man word was the *Latine* *Chellus* feigned; and it appeareth by *Agricola*, that there are two kinds  
of these; one greater, which are call'd *Zyfel* and *Zelfeile*, and another lesser (called *Pile*) which may  
be the same that is also called *Bibulus*, and differeth from other, because it is used for meat. These are  
bred in *Croatia*, and in the Country about *Venice*. They have a strange smell or favour, which is said  
to be hurtful to the head: They eat both fished and hung in the smoke, and also fresh and new kil-  
led. With their skins they edge the skirts of garments, for it is as soft as the skin of a Hare: and be-  
side the common nature of mice they are tame. They also have very large cheeks, whereinto they  
gather an innumerable quantity of grain, and carry it into their den, as it were in bags against the  
Winter. They live shut together in a Cave and are not driven forth but by infusion of  
hot water. They gather a store of Nuts into their Caves, and therefore as well as for, their  
flesh do men hunt and seek for them.

The name, de-  
scription, and  
disposition.  
*Agricola*.

## Of the MOUSE PONTIQUE.

The name of this Mouse is given unto it from the Island out of which it was first brought, *Olus* mag.  
named *Pontus*, and for this cause it is also called *Venezus*, because it was first of all brought into  
*Germany* from *Venice*. It is called also *Varius* by *Idorus*, from whence cometh the German  
word







*Actius.* certain clefts or rifts in the same. Moreover the nature of this Beast is such, that for the most part he doth cover to bite those whom he can come unto by the stones or genital, not only men, but also all other brute Beasts whatsoever: and thus much shall suffice concerning the biting of this Beast.

*Disco. ider.* Wormwood being beaten or bruised small, strained in a fine linnen cloth, and mingled in Wine, given to the party, either man or woman, in Wine to drink, who is bitten by a Shrew, will procure him present ease and remedy. The same also is an excellent remedy for the bitings or stings of a Sea-dragon. Vinegar is very medicinal for the bitings of the Shrew, and of Dogs, as also for the fish called by the *Latine*, *Scelopodra*, (which voideth all her bowels out until the book come forth, wherewith she is taken, and then sucketh them up again) the Scorpion and all other venomous Serpents.

*Pliny.* But the *Græcian* Physicians affirm, that the same ought to be mingled with other medicines for the helping of the aforesaid diseases, as to take the ashes of the Shrew, being burnt, the gum or liquor of the Herb called Fennil-giant, dried Barly beaten into small powder, Mugum or liquor of the Herb called Purple, or Mothmullein, and mingle them all together with Vinegar, and being so applied they will presently cure the aforesaid stings or bitings.

*Avicenna.* Garlic being bruised, and the juyce thereof anointed upon the place which was bitten by a Shrew, will presently expel the pain, and wholly cure the sore. For the expelling of the superfluities of the parings of the dead flesh, growing round about the sore, being not cast away, but remaining thereon. Take Cummin and cover the wound or biting therewith, then apply Garlic being beaten into Oyl thereunto, and anoint the places about the sore, as also the sore it self very diligently, and in very short space of time it will cause the same to fall away of it own accord. For the healing also of the bites of this Beast: Take Garlic, the leaves of a Fig-tree, and Cummin, mingle them very well all together, till they come to a mollifying or temperate substance; then take the same, and fashion it in the form or manner of a plaister, and it will very speedily and effectually cure the sore.

*Discoferides.* The seed or leaves of Coleworts, being beaten together with Vinegar, and the herb called *Alfa*, *so* *ida*, is very good and profitable to be applied either to the bites of this Beast, or a ravening Dog. The dung of a Dog being taken and anointed upon either Man or Horse which hath been bitten by a Shrew, will be an excellent remedy both for the curing and healing them of the same. The hoof of a Ram being dried, beaten into powder & afterwards mixed with Hony, will be likewise very good for those which are bitten with the same Beast, so that they be first tempered and fashioned in the manner of a plaister, and then applied thereto. The little white stalks which proceed from a black Fig, being beaten with the leaves of the herb called Moth-mullein, Wax, and Vinegar, until they come unto a mollifying juyce or salve, will be an excellent remedy against the biting of the Shrew, being anointed thereupon.

*Pliny.* The young or tender stalks of a wilde Fig-tree, be they never so few or small, being first steeped in Wine, then lapped in a leaf of the same Tree, and so applied unto the stings and bites of Scorpions, and the Shrew, will in very short time cure and heal the same. Provided always that the wound be well and diligently washed or washed, before any thing be put or applied thereunto.

*Discoferides, Avicenna, and Aethanasius*, do affirm, that the excellentest, and medicinallest cure for the bites of a Shrew is this: To take the Spleen of the same Beast, and beat it together with Vinegar, and the Gum called *Gallbanum*, then to anoint it or rub it upon the sore, and it will presently expel away all pain, and in some short space altogether heal it. If the red bunches or ulcers, which usually grow about the bites of a Shrew, do fortune to break; take very sharp and strong brine or pickle, and rub it both about, and within the sore, and afterwards apply Barly being burned and beaten into small dust or powder thereunto, which medicine although it seem somewhat grievous and painful, yet it is very good and profitable for the expelling either of the stings of Scorpions, or the bites of the Shrew or ravenous Dog.

*Actius.* The genital of a Hare being beaten into powder mingled with Vinegar, and anointed upon the bites of a Shrew, doth speedily cure them. Wilde Mallows being mingled with those Mallows that grow in the Garden, have in them a very effectual force and power to cure all stings or venomous bitings; especially of Scorpions, Shrews, Wasps, and such like stinging creatures.

The Shrew being cut and applied in the manner of a plaister, doth effectually cure her own bites. The Shrew being killed and anointed all over with Oyl, and dirt or mire, applied unto the Ulcers or red swellings which come by her venomous teeth, will very speedily procure them to break. The Shrew being cut or beaten into small pieces, dried into powder, mixed with Vinegar, and fashioned in the form of a plaister, will very speedily and effectually cure the bites of a Shrew, whether she be great with young or not, so that they be well applied therunto.

But there are some which do think it nothing convenient to mingle the Shrew with any other thing whatsoever, but that it is only after this manner to be applied by it self, as to take it burned or dry it, and then to pound it in powder, and so to sprinkle it in the wound or sore, which in very short time will easily heal it. The Shrew falling into the farrow of a Cart wheel doth presently die: the dust thereof in the passage by which the wheel, being taken and sprinkled into the wounds which were made by her poisonous teeth, is a very excellent and present remedy for the

the curing of the same. *Mathæus* alleadgeth out of *Nicander*, that the dirt which cleaveth unto the wheels of a Chariot, being scraped off and sprinkled into the bites of a Shrew, will be very medicinal for the healing of them, which thing he himself thinketh a meer fable, and not to be believed. If the pimples or bladders, which arise in the bites of a Shrew shall be thought convenient to be broken, for the performing of the same, take the skin of a baked or roasted Pomgranate, and spread it upon the aforesaid red pimples, as hot as possible may be suffered for some small time, and it will cause the ulcers to break, and all the corruption to issue forth.

If it grow unto an Impostume, take the little berries or pellets which are within the Pomgranate, being very well baked and apply them unto the sore some short time, and they will very easily cure the same. Mustard-seed being mingled with Vinegar, anointed upon the bites of a Shrew, doth very effectually heal them. A Moul being bruised into small pieces, and applied unto the bite of a Shrew in the form of a plaister, is a very excellent remedy for the curing of them. Pitch and Trifoly being baked, and rubbed very hot upon the bites of a Shrew, is accounted a very medicinal cure: but it is requisite that this fomentation be given unto none but such as are of a strong and powerful body, and are also able to endure pain. The liquor of the Herb called Southernwood being given in Wine to drink doth very much profit those which are troubled, and painted in their limbs with the bites of Shrews. Wormwood being used in the like manner, will cure those which are bitten by a Shrew.

The genital of a Lamb or Kid being mingled with four drams of the Herb called *Arifolochia*, or Hart-wort, and six drams of the sweetest Myrrh, is very good and medicinal for curing of those which are bitten or stung with Shrews, Scorpions, and such like venomous Beasts. The leaves of Coleworts being dried, mingled with flower, and tempered together, until they come into the form of a plaister, will very much help against the venomous bites of the Shrew. The seeds of Coleworts, and the leaves of the same herb being mingled with Vinegar, and the herb called *Alfa* made beat or pounded together, do very well and speedily cure the bites of the Shrew, as also of a ravenous Dog, if the same in due time be applied therunto. The liquor also of the leaves of Coleworts being given in any kind of drink, is good and wholesome for the curing of the aforesaid bites or wounds. The Nut of a young Cypress tree being mixed with a certain Syrup or potion made of Hony, Water, and Vinegar, and afterwards drunk, doth very speedily procure ease and help for those which are bitten by a Shrew.

The root of a white or black Thistle, being beaten or bruised and given in drink, doth very effectually help or cure those which are bitten by a Shrew. The like virtue hath the herb called *Racemita*, and also the seed thereof being given in any kind of drink. The gum or liquor which proceedeth from a kind of Ferula, being given in Wine to drink, doth very much help and cure those which are bitten by a Shrew. The same virtue also in it hath the root of the herb called Gentian or Butterwort, being given in Wine to drink. One or two drams of the youngest or tenderest leaves of the Laurel tree, being beaten small and given in Wine to drink, doth speedily cure the sores or wounds which are bitten by a Shrew: the same being also used in the said manner, and given in some certain portion unto Horses to drink, doth quickly help and heal them: But there are some which before all other medicines doe commend this for the best, and chiefeft; that is, to take the juyce which proceedeth from the leaves of the Laurel tree, and the leaves themselves, being moist and new growing, and to boil them in Wine, and being once cooled, to give it to any which is bitten by a Shrew, and this will in very short space altogether help them. A young Weevil being given in Wine to drink, is accounted very medicinal for those which are bitten by a Shrew, or stung by a Scorpion or any other venomous creature. The herb called Belladonna or Collimay, the herb called Barban, or wilde Pellitory, the herb called Bonony, the herb called Water-mint, or Water-cress, the liver and deliquie gum called Storax, as also the herb called Vervain, being each of them severally by themselves, being given in Wine to drink, or applied in the manner of a plaister, doth anointed upon the bites or wounds which come by the venomous teeth of a Shrew, will very effectually cure the beginning thereof.

The biting of a field Mouse or Shrew, is very troublesome or grievous to all labouring Beasts; for indubitably after her bitings there do little red pimples arise, and there is most danger of death in those Beasts which she bites when she is great with young; for the aforesaid pimples will then presently break, after which the Beast is bitten will instantly die. The Shrew doth also kill some labouring Beasts with poisons, as chiefly Horses and Mares; but especially, and for the most part Mares, which are great with young. There are some which do affirm, that if Horses, or any other labouring creature do feed in that pasture or grass in which a Shrew shall put forth her venom or poison in, they will presently die. In what place soever a Shrew shall bite in any creature, it will be compassed with an exceeding hard swelling, the Beast also being so bitten, doth express his grief or sorrow with much pain, and fraining his body doth likewise swell all over, his eyes do in manner weep, the swelling in his body doth likewise matter, and thereby putteth on, the which doth run out of his body, and doth vomit all substance up as soon as after he receiveth death. If an Ass being great with young be bitten by this Beast, in a very short time he is the same

But if the Shrew do bite any Beast when she is great with young, it is known by these signs or marks, there will certain red pimples compass the fore round about, and do spread themselves over all the body of the bitten Beast, and will in short space destroy him, except there be procured some







Strabo.

Places of  
their abode.

Field-mice were driven to flight and to forsake their patrimonies, for they destroyed the roots of the corn, like some horrible drought, or some unresistible cold frost. *Cossa* a Town of *Umbria*, in the days of *Pliny*, which at this day is called *Orbi tellus*, was destroyed by Field-mice, (as *Volaterranus* writeth.) *Niphus* also saith, that he saw in one night, all the Corn-fields at *Calenum* destroyed by the Mice.

There are such a number of these Mice in *Spain*, that many times their destruction caused plentiful diseases, and this thing happened amongst the *Romans* when they were in *Cantabria*, for they were constrained to hire men by stipends to kill the Mice, and those which did kill them, scarce escaped with life. The Inhabitants of *Gyarus*, an Island of the *Cyclades*, after they had long resented the violence of these Mice, yet at length they were fain to yield unto them, and forsake their Territory; and the Mice after their departure, through hunger did gnaw the Iron. We have shewed already how the *Phylistines* were punished with them, until they had sacrificed to *Apollo Smintheus* and how the *Aeolians* and *Trojans* were annoyed with them, until they had sacrificed to *Apollo Smintheus* and how the Mice of *Heracles*, at the time of Grape-gathering, do go out of the Country and return again in the Autumn. When *Senacharib*, King of the *Arabians* and *Egyptians*, invaded *Egypt*, it is said by *Herodotus*, that *Pulson* in the night time sent upon his Army such an innumerable swarm of wilde Mice, that before morning they had eaten asunder their Quivers, Arrows, Bows, and all warlike instruments, so that the next day, for the want of weapons, and fear of their enemies, they were constrained to take their heels and run away. And to conclude, by the same means the *Chalidians* were driven out of *Elmynum*, a City of the Mountain *Albor*; and thus much shall suffice for the harm of these Mice. They make their dwellings and habitation in the earth, according to this saying of *Virgil*:

—*Sape exiguum munus  
Sub terra posuisti; domos, atque horrea fecisti.*

Yet now and then they come out of the earth, although it be but seldom. They heave up hills like Moles, and they eat and devour the roots of corn and herbs. They make not very deep holes, but dig under the turfs and upper face of the earth, so that when a man walketh upon it, he may perceive it by the sinking in of his foot: steps if the hole be opened with a Spade, they close it again as a Mole doth, but not so speedily, for they defer it two or three days together; and therefore if it be watched, they may kill her at her return by treading upon her; concerning the manner of taking them, these observations following may be put in practice.

Driving away  
of these Mice

Pliny.

Palladius.

These kinde of Mice are driven or chased away with the ashes of a Weevil, or of a Cat mingled with water, and by sprinkling of scattering feed or corn abroad, or by some things well sodden in water: but the poisoning of these Mice is in the scent or favour of bread: and therefore they think it more profitable to touch the feed or corn lightly with the gall of an Ox. *Apuleius* doth affirm, that to soke the grain or corn in the gall of an Ox before you sprinkle it abroad, is very good against these Field-mice: also (as it is read in *Gegon Græc.*) it doth very much commend the gall of Oxen, where-with as he saith, if the feed or corn be touched, they shall be freed from the molestation or trouble of these Field-mice.

Notwithstanding in the Dog-days, Hemlock-feed with the herb Hellebore is better, or with wilde Cowcumber, or with Hen-bane, or being beaten with bitter Almonds, and Bears-foot, and to mingle with them juft as much meal or corn, and beat and stamp them in Oyk, and when you have so done, put it into the hollow places of these Field-mice: and they will die as soon as ever they shall tast of it. *Aulus* doth affirm also, that Hen-bane-feed doth kill these kinde of Mice, without the mixture of any other thing. Very many do stop the passages of them with the leaves of *Rhododaphne*, who do perish in the time they are labouring to make their passage, by the gnawing of them.

*Apuleius* also saith, that the people of *Bithynia* have had much experience of these things, who stopped the passages of these Mice with these *Rhododaphne* leaves, so that they desire to come forth by touching the same often with their teeth: which truly so soon as they shall touch or come unto they shall presently die. But they use a kinde of incantation which is this that followeth; I do adjure all ye Mice, which do remain or abide here, that ye do not offer me wrong, or suffer me to be wronged of any other. For I do assign and appoint you this field (then he nameth the field) in which if I should surprize you hereafter, I call *Luna* to witness, I will tear every one of you into seven pieces: When as thou hast writ this charm, binde paper fast to the place wherein the Mice haunt, and that before the rising of the Sun: so that the characters or marks may appear on the outside cleaving to a natural stone of that place. I have written this (saith the Author) lest any thing should seem to be overskiped: neither do I allow or prove such things can be done, but I rather counsel all men that they do not let their minde to any of these, which are more worthy of derision, then imitation. If thou shalt fill the passages of these rustical or Field-mice with the ashes of an Oak, he shall be possessed with a fervent desire to it, often touching it, and so shall die.

Marcellus.

The medicines  
of Field-mice.

Schlosser.

These Country Mice, that is to say, those Mice which are found in the fields, being bruised and burned to ashes, and mingled with fresh Hony, doth comfort or restore the sight of the eyes by diminishing the darkness or dimness thereof, in what field soever you shall finde any thing, dig them up by the roots with a little stake or post.

## Of the WOOD-MOUSE.

*Pliny* doth oftentimes make mention of this Wood-mouse, or rather a Mouse belonging to the Wood, but he doth it only in medicines; but that it doth differ from this Country or Field-mouse we have shewen in the chapter going before, because it doth not inhabit or dwell in the Countries or tilled places, as the Country or Field-mice do, but doth inhabit in Woods and Forrests. The Wood-mouse is called in *Greek* as the Country-mouse: but I think it to be a kinde of Dormouse, which proceedeth from the kinde of Wood-mouse. *Pliny* truly doth make the same remedy or medicines of a Dormouse, as he doth of a Wood-mouse, as I will a little after rehearse or recite unto you. Also I should have thought that a Sorex had been the same, because it is a Wood-mouse, but that, that one place of *Pliny* did hinder me, where he commendeth the ashes of a Wood-mouse to be very good for the clearness of the eyes, and by and by after did shew or declare that the ashes of the Sorex were good also in the same use, as I will recite or rehearse below in the medicines or remedies of the Wood-mouse. *Agitola*, a man of great learning, doth interpret or judge the Wood-mouse to be that Mouse, to the which they do appoint the name deriyed from *Avelanus*: but he doth account that to be the Sorex, which I will shew or declare beneath to be the Shrew. I do understand that there are properly two kinds of the Wood-mouse spoken of before. The one of them that which *Albertus* doth write, saying that there is a certain kinde of Mouse which doth build or make her habitation in trees, and of a brown or swart colour, and having also black spots in her face, which only is called by the universal name of a Wood-mouse. Of the same kinde *Pliny* doth mean, (if I be not deceived) when he writeth, that the mast of a Beech-tree is very acceptable to Mice, and therefore they have good success with their young ones. The other which is peculiarly named the Sorex, which (saith *Pliny*) doth sleep all the Winter time, and hath a tail full of hair: whose shape or form we propole and set evidently before you. But that I may more distinctly handle those things which *Pliny* hath shewed to us concerning the Wood-mouse; I will write her down separately, or by it self, and afterwards concerning the Mouse which hath her name deriyed from Fil-birds, which the *Germani* have left in writing, and which I my self have considered or observed; and last of all I will write concerning the Sorex peculiarly and severally from the Ancient Writers.

The ashes of a Wood-mouse being mingled with Hony, doth cure all fractures of bones, the bruis also spread upon a little piece of cloth, and covered with wooll is good also; but you must now and then spread it over the wound, and it doth almost make it whole and strong within the space of three or four days: neither must you mingle the ashes of the Wood-mouse with Hony too late: Hony also being mingled with the ashes of Earth-worms, doth draw forth broken bones. Also the fat of these Beasts, being put to Kibes is very good; but if the Ulcers are corrupt and rotten, by adding Wax to the former things doth bring them to cicatrifying. The Oyl of a burned Locust is also very good; and also the Oyl of a Wood-mouse with Hony, is as effectual as the other. They say also that the heads and tails of Mice mixed with the ashes of them, and anointed with Hony, doth restore the clearness of the sight, but more effectually being mingled with the ashes of a Dormouse or a Wood-mouse.

The medicines  
of the Wood-  
mouse.  
*Pliny*.

Marcellus.

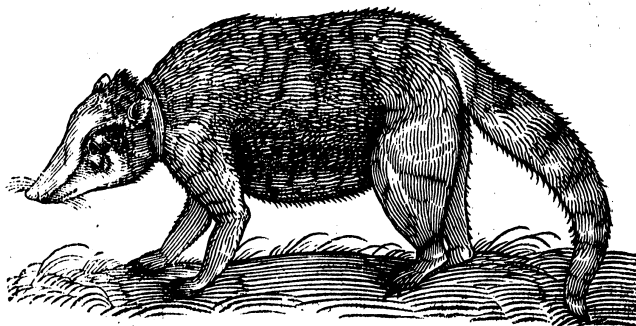
## Of the Nut-mouse, Hazel-mouse, or Filbird-mouse.



This Beast is a kinde of Sorex, and may be that which the *Germani* term *Ein gross Hazel-mus*, a great Hazel-mouse, so called because they feed upon *Hazel-nuts*, and Filbirds. The *Flemings* call it *Ein Sleperat*, that is, a sleeping Rat; and therefore the *French* call it by the name *Leroi*, where-by also we have shewed already, they understand a Dormouse.



*Herodotus* also affirmeth the like of those Mice, to be in shape and colour like *Vipers*: but *Pliny* and *Aristotle* do both disallow it, and say that in those juice there is nothing common to *Vipers*, but only to *Hedge hogs*, as concerning their sharp bristles.



There are also some Mice in *Egypt*, which do violently rush upon pastures and corn: of which things *Aelianus* speaketh, saying in this manner: When it beginneth first to rain in *Egypt*, the Mice are wont to be born in very small bubbles, which wandering far and near through all the fields, do affect the corn with great calamity, by gnawing and cutting asunder with their teeth the blades thereof, and wasting the heaps of that which is made in bundles, do bring great pains and business unto the *Egyptians*: by which it comes to pass, that they endure all manner of ways to make snares for them, by setting of Mice-traps, and to repel them from their inclosures, and by ditches, and burning fires to drive them quite away: but the Mice as they will not come unto the traps, for as much as they are apt to leap, they both go over the hedges, and leap over the ditches. But the *Egyptians* being frustrated of all hope by their labours, all subtil inventions and policies, being left as it were of no efficacy, they besake themselves humbly to pray to their Gods to remove that calamity from them. Whereat the Mice by some fear of a divine anger, even as it were in battel array of observing a Squadron order, do depart into a certain Mountain: The least of all these in age do stand in the first order, but the greatest and eldest do lead the last troup, compelling those which are weary to follow them.

But if in their journey the least or youngest do chance through travail to wax weary, all those which follow (as the manner is in Wars) do likewise stand still, and when the first begin to go forward, the rest do continually follow them. It is also reported, that the Mice which inhabit the Sea, do observe the same order and custom.

The *African* Mice do usually die as soon as ever they take any drink: but this is commonly proper unto all Mice, (as *Ephesus* affirmeth) where it is written above concerning the poisoning of Mice. Mice, (but especially those of *Africa*) having their skins pulled off, boiled with Oyl and Salt, and then taken in meat, doth very effectually cure those which are troubled with any pains or distillies in the lungs or lights. The same doth also easily help those which are molested with corrupt and bloody sperrings with retchings.

The kinds of *African* Mice are divers; some are two footed; some have hair like unto *Hedge hogs*; some faces of the breadth of a Weevil: but some call these Mice *Chryseus*; some *Egyptian*, as I have before declared. In *Arabia* there are certain Mice much bigger then *Dormice*, whose former legs are of the quantity of a hand breadth, and the hinder of the quantity of the joint to the end of the finger: I do understand them to be so short, that nothing thereof may seem to appear without the body, except the space of the joints of the finger, as it is in *Martinetes*.

It is said, that the garments of the *Armenians* are usually woven with Mice which are bred in the same Country, or diversly docked with the shape of the same creature. The Author writeth, that *Pliny* maketh mention of the *Armenian* Mouse, but I have read no such thing: therefore he doth perchance take the *Armenian* Mouse for the *Shrew*. In *Cappadocia* there is a kind of Mouse which some call *Squirrel*. *Aelianus* writing of the *Caspian* Mice, *Amynas* (such he) in his Book entitled *De Menfimbis*, which he doth so inscribe, saith that in *Capria* there do come an infinite multitude of Mice, which without any fear do swim in the floods, which have great and violent currents, and holding one another by their tails in their mouths, (as it is likewise reported of *Wolves*) have a sure and stable passage over the water.

A wonder in the *Egyptian* Mice.

*Aelianus*.

Medicine by *African* Mice.

*Pliny*.

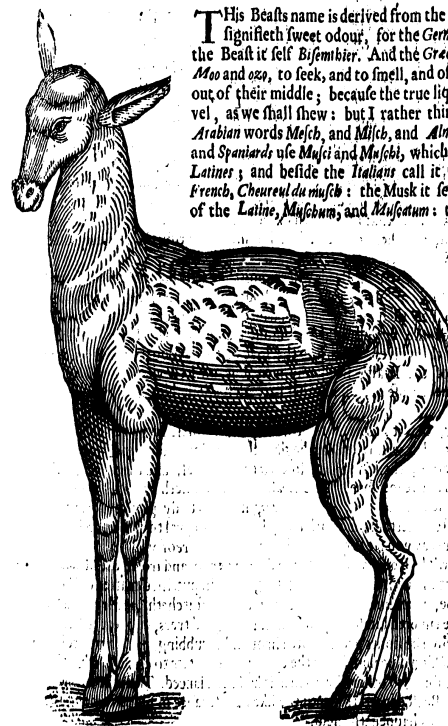
The *Arabian* Mice.

The *Armenian* Mice.

Of the *Caspian* Mouse.

But when they pass over any tillage of the earth they fell the corn, and climbing up into trees, do eat the fruit thereof, and break the boughs: which when the *Caspians* cannot resist, they do by this means endeavour to restrain their turbulent incursions: for they remove all things which may hurt birds having crooked talons, who come presently so flying in such great flocks, or companies, that may seem to be clouds to expel the Mice from their borders, and by a proper gift incident unto them by nature, do drive away hunger from the *Caspians*. Neither in quantity are these Mice inferior to the *Egyptian* *Ichneumons*: they are also ungentle, and they do so less devour with the strength of their teeth, then the Mice of *Teredon* in *Babylon* do Iron, whose soft skins the Merchants carry to the *Persians*. The *Indian* Mouse, or *Potamob* Mouse (as some learned later Writers do write) is no other then the *Ichneumon*. *Antonius musa Brasavolus*, took the before expressed figure of an *Indian* Mouse, (for so he did call it) which before that time was shewn by *Billonius*, and I guessed it to be an *Ichneumon*; and truly in the snow (if you take away the beard) and in the ears it doth agree, but in the tail it doth differ, which doth rather resemble a *Cat*: and in many other things, which by conferring them are easie to be marked, and as I conceived it, I have set it down.

## Of the Moschato, or Musk-cat.



This Beasts name is derived from the *Hebrew* word *Bosem*, which significeth sweet odour, for the *Germans* call the same *Bisem*, and the Beast it self *Bisembier*. And the *Grecians* derive their *Moschos* of *Moo* and *os*, to feed, and to smell, and of *Mos* *Chelishai*, to proceed out of their middle; because the true liquor cometh out of the navel, as we shall shew: but I rather think they derive it from the *Arabian* words *Mosch*, and *Misch*, and *Almisch*. The *Italians*, *French*, and *Spaniards* use *Musci* and *Muschi*, which is derived from the later *Latines*; and beside the *Italians* call it *Caprisio del Musci*; and the *French*, *Chereuil du musch*: the Musk it self is called in *Italy*, *Muschio*; of the *Latins*, *Muschem*; and *Muscatum*: the *Myrians*, *Plants*; and the

*Germans*, *Bisem*. The *Arabs* were the first that wrote any discovery of this Beast; and therefore it ought not to seeme strange, that all the *Grecians* and *Latines* derive the name from them. And although there be an unreconcilable difference amongst Writers about this matter, yet is it certain that they come nearest unto the truth that make it a kind of *Roe*: for the figure, colour, stature, and horns, seem to admit no other similitude, except the teeth which are like a *Dogs*, whereof two are like a *Boars* teeth, very white and straight. And there be some (as *Simon Sides*, and *Almish*) which say he hath also one horn; but herein is a manifest error, because no man ever

ever saw one of these Beasts doth so much as make mention thereof; and therefore the original of this error came from the words of *Aviden*, who writeth that his teeth bend inward like two horns. *Caden* writeth, that he saw one of these dead at *Milan*, which in greatest fashion, and hair resembled a *Roe*, except that the hair was more thick, and the colour more gray. Now the variety of the hair may arise from the Region wherein it was bred. It hath two teeth above, and two beneath, not differing absolutely from a *Roe* in any thing, except in the favour. It is called *Cervale*, they are lesser, thinner, and more elegant creatures then the *Roos* are. *Paulus* *Plinius* writeth thus of this Beast: The creature out of whom the Musks is gathered, is about the bigness of a *Cat*, (he should say a *Roe*) having gross thick hair like a *Hart*, and hoofs upon his feet. 48



Lead, close stopp'd a long time, for the lead which is cold and moist, agreeth well with the nature of the Musk, and therefore if a leaden vessel be wanting, so as ye be forced to use glass and silver, then must you put two or three pieces of lead into it, for the better preservation, and covering the passage all over with Wax, and above all things you must avoid all kinde of Spices, taking heed that no grain thereof come into it. If while it is in the vessel it lose the favour and be dead, then it is to be recovered by opening the mouth of the Vial, and hanging it over a privy; for when the stink and evil favour cometh unto it, *Contra faetorem eludatur*, & quasi ludando reviviscit, it striketh against the filthy stink, and as it were reviveth in that contention, saith *Hidaru*, *Albertus*, and *Platarius*.

*Benedictus.*  
The adulterating of Musk, and the means to detect it.

But concerning the adulterating of Musk, I will say more in this place. First of all, the Mountebanks do corrupt it by mingling with it the liver of a Calf. Also by a root called *Makir*, and an herb called *Salleb*. Many times the dung of Mice is sold for Musk, and so great is the deceit herein, that a man may not truit the outward shape of an intire cod, for there be Impostors which can counterfeit them, and make them in all parts for the outward appearance, and fill them with certain stufte, interposing some little true Musk among it until it have a reasonable favour, and therewithal deceive simple people.

It is also adulterated by mingling with it a little Goats blood fried, or brown Bread fried, so that three or four parts of these, will receive seasonable taste from one part of the Musk. It is also adulterated in the skin by putting pieces of the skin into it, and it may be known from the true Musk, one because it will weigh twice so heavy. The *Saracens* use this shift above all others, and there is one because it will weigh twice so heavy. The *Saracens* use this shift above all others, and there is one because it will weigh twice so heavy. The principal way of making counterfeit Musk, which is this; they take Nutmegs, Mace, Cinnamon, Cloves, Gilly-flowers, and Spikenard, of every one a handful, all these being beat diligently together, and dried and sifted, they are mingled with the warm blood of a Dove, and afterwards dried in the Sun, then are they seven times sprinkled over, or moistened with the water of Musk-roses, and be the Sun, then are they seven times sprinkled over, at length they mingle therewithall a third or fourth part twixt every sprinkling they are dried; at length they mingle therewithall a third or fourth part of true Musk, and then sprinkle it over again with Musk-rose-water, so divide it into three or four lumps, and take the white hairs from under the tail of a Roe or Kid, and so put it in a vessel of glass.

Benyvine, white Wax taken out of a new Hive of Bees, the rotten part of Eve-trees, and a little Musk, are mingled all together to make a counterfeit Amber, for it will smell like Civet, or Musk, or else *Strax*, and the powder of Lignum aloes, with Civet, and Rose-water; but the fraud in one and other is easily depredended, for both the odor and the colour are different from the true Amber, and also it will sooner wax soft in water, than that which is natural.

Some do corrupt their Musk with the seed of Angelica, or rather with the root of it, because the root smelleth sweet like Musk, but the cofenage may be easily discovered, by putting it into water: for the Angelica will sink, and the Musk will swim. The true Musk is sold for forty shillings an ounce at the least. It is also observed by *Arnoldus Villanovanus*, that in the presence of *Alfa fetida* or *Gelsorem*, the best Musk will have a horrible and intolerable favour, although they touch not one another, which cannot be ascribed to any known reason, but to some secret in nature. The sweetest of the *Arabian Musk* is described by *Alcinus* in this verse;

*Es celebris suavi est unguine Muscus Arabi.*

Herbs resembling Musk.

There be divers herbs which smell sweet like Musk, as Angelica, Doris, Musk-gilliflowers, Musk-grapes, the leaves of a Winter Cherry, and an herb growing near *Basil* without a name, like wilde Parthey, the Damasine-rose, and many other. Wilde Cats and Martins do also render an excellent much like Musk; and there are Hares called *Mojchia*, which leave such an intolerable smell in the impression of their foot-steps, that the Dogs by touching them grow mad, as we have shewed in the story of the Hare: And thus much for the description of this Beast; now followeth the medicines.

*The Medicines of the Musk-cat.*

A very little part or quantity of a Musk-cat is of great vertue and efficacy; wherefore it is very sparingly used in medicines or potions, neither is there any part thereof beaten or bruised, as it is of all other Beasts, but it is melted and dissolved in water which proceedeth from the sweetest Roses. It is also a Beast which is very hot and dry, but rather more dry then hot, yet notwithstanding the same his heat is asswaged and allayed by no other thing but only the Gum called *Camphire*; and his drinels is only moistned or moistified with Oyls, and very sweet, as Oyl of *Vi*, *Camphire*, and Oyl of *Roses*. Amongst sweet smells and favours, the principallest and chieftest laud and commendation is attributed unto the smell which proceedeth from the Musk-cat: For he doth not only with his odoriferous and delightful favour please and content the scent of men, but also doth strengthen the spirits, and all the parts of mans body, yea and that in a moment, for the slenderest of his parts, which although it doth forthwith penetrate or enter into the scent of man, yet doth it endure longer, and is not so speedily or quickly dissolved as the scent or favour of any other sweet smell whatsoever.

A Musk-

A Musk-cat and the herb called *Mercuries-fingers* or *Dogs bane*, being given in purging medicines to drink, do greatly renew and refresh the decayed strength or force of those which have been before times weakened with divers and continual medicines in their members. The same is also very profitable for those which are effeminate or defective, and eclipsed in their minde or courage, as also for those which are weak and feeble in their joynts, not by any hurt, or any other casualty being enfeebled, but being always so even from their childhood. A Musk-cat is an excellent remedy for those which are troubled with fear in their heart; and also for those which do quiver or shake either for fear of any other thing throughout all the parts of their body. The same is a very profitable and medicinable cure for those which are grieved with any ach or pain in their head, or with any enormity or trouble in their liver, and is also being given simply by it self, without any thing mixed in it, or compounded in Wine, very good and wholesome for the healing and curing of those who have any pain or grief in their stomach, which cometh by the occasion of any cold.

A Musk-cat being put unto the body of any man in the form or manner of a plaister, doth confirm and make strong both his heart and all the rest of his bowels, or interior parts: it doth moreover encrease both strength and power in all his members, yea and in the very bones, the efficacy thereof is of such power and vertue. The same being laid or anointed upon the head, is very effectual for the expelling or driving away of the rheume which falleth from the head into the nostrils, and by that means procureth heaviness in the same; and for the amending and curing of the swimming dizziness or giddiness in the head through the abundant humors which remain and stay therein, and also for the bridling and restraining of lust and venerie.

The same being used in the aforesaid manner doth temperate and confirm the brains of any man, besides it caleth and helpeth those which have pain about their heart, by the which they suppose their very heart to ache. The smell of this Beast is both profitable and hurtful; for unto those which are cold of constitution, the scent is very pleasant in regard that it is hot of it self, and is very delightful in their favours; but unto those which are hot of nature it is very noisome, in regard that the heat and strong scent thereof overcometh their senses, and oftentimes causeth their heads to ache, and be full of pain; and doth also stir up in them that pestiferous disease called the *Falling-sickness*: but unto women which are of a hot and fiery constitution it is more hurtful and noisome, for it breedeth in them a very pestiferous disease, which choaketh their Matrice or Womb, and causeth them oftentimes to swoound, it is also called by some the Mother. The sneezing of a Musk-cat is an excellent remedy against the resolution of the sinews or the Palsie. A Musk-cat is very good and wholesome for the helping and curing of those which are troubled with any deafness or astonishment in any part of their bodies; as also for the driving away of melancholic and sorrowful passions out of mens mindes, and for the incitating delightful mirth and pleasure in them.

A Musk-cat being mingled with dry plaisters which are used for the healing of the eyes, is an excellent remedy for the expelling and driving away of the white skin which doth usually cover the sight, and for the drying up of moist rheumes and humors, which in the night time do fall from the brains and the head, and by that means doth much hurt and damage the sight of the eyes; as also for the clarifying and healing up of any pain or disease therein.

A Musk-cat is an excellent remedy for those which have a desire to vomit and cannot, it doth also renew an appetite or stomach in those unto their victuals which do loath and abstaing from all sustenance, and doth loosen and dissolve all thick puffs or windiness in the interior parts or members of any one.

A Musk-cat being mingled with a caustick medicine, is very profitable and wholesome for the bringing forth of those Womens menfes or fluxes which are stopped, and also for moving conception in those women which are hindered in it by the occasion of some great cold.

A medicine or suppository being made of Ambergreese, and mingled with a gum coming out of *Syrta* called *Syrta*, and then mixed both together with a Musk-cat and so beaten, until they come unto a certain salve, and laid unto the secret parts of a woman, is very good for the aforesaid disease. There is a certain juice or moistness in a Musk-cat which being pressed forth or dissolved, and mixed with the Oyl called *Palma Christi*, and anointed upon the yard of any man, doth stir him up to lust and venerie. If the least part of a Musk-cat be eaten by any one which is troubled with a sinking breath, it will presently expel and take away the stink thereof. And thus much shall suffice concerning the cures and medicines of the Musk-cat.

### Of the MULE.

The Mule is a Beast, called by the Hebrews *Perd*, from whence comes the feminine *Phidab* 2. of the *S. royal* King. 1. and there be some that say that the reason of the Hebrew word is from the separation and sterility of this Beast, for it is *Perd*, *quia non parit*. The Chaldei word is *Cudana*, the Arabian, *Beal*; but Gen. 36. for the Hebrew word *Femin*, many translate Mules. The Arabians, *Regals*, but the Grecian Septuagints, *Hemianous*. The Grecians also call a Mule *Arabe*, from the strength of his body. The Latins call a Mule *Mulus*, and *Semiasinus*, that is, half an Ass, because on the one side he is an Horse, and on the other side an Ass, and therefore in his conditions he more resembleth an



Plutarch.

Divers kinds  
of Mules.

an Afs then an Horfe, whereupon lyeth this tale. A certain *Lydian* Mule seeing his Image in the water, grew to be afraid of the greatness thereof, and thereupon took his heels and ran away as fast as he could; neither could he be stayed by all the wit of his Keepers: At length the Mule remembering that he was the son of an Afs, he stayed his course and came back again neighing. The *Italians* call a Mule *Mula*, and the female *Mula*, like the *Latines*, and the *Spaniards*. The *French*, *Mulet*, and the female *Mule*, from whence cometh the *English* word Mule. The *Germani*, *Multhire*, or *Mulefch*. The *Illyrians*, *Miseck*, and the *Flemings*, *Mul*.

There is another kinde of Mules in *Syria*, divers from those which are procreated by the copulation of a Mare and an Afs, and they receive their names from the similitude of their faces. For there is no other cause, why wilde Ases should be called Ases, but only their similitude of face. And as among wilde Ases some of them are singularly swift, so also among these *Syrian* Mules, Ases. And as among wilde Ases some of them are singularly swift, so also among these *Syrian* Mules, there are some excellent speedy Courfers. These Mules procreate in their own kinde, and admit no mixture, which *Aristotle* proved by nine of them which were brought into *Phrygia*, in the days of



Pharmac.

*Pharmacus*, the father of *Pharmacus*. *Theophrastus* also reporteth, that in *Cappadocia*, the Mules engender among themselves, which *Aristotle* remembereth in his wonders, and he might well have spared it, for they are a kinde of Cattel among themselves. There be flocks of Ases and Mares in *India*, where the Mares do willingly admit the Ases in copulation, and bring forth red Mules, the best of all other for running.

But among the *Indian* Phyllians, their Ases, Mules, Oxen, and Horfes, are no bigger then Rams. The generation of Burdons. The parts of Mules and their colour.

As the Mule is begotten betwixt an Afs and a Mare, so the Burdon is begotten betwixt a Horfe, and a Shee-As, wherefore the *Italians* call him *Mulo Bastardo*, that is, a Bastard Mule. For as the Mule more resembleth the Afs then the Horfe, so the Burdon more resembleth the Horfe then the Afs; the reason is; because all kinds follow the father. The Mule hath some parts proper to the Afs, as long ears, a terrible voyce, a cross upon the shoulders, small feet, a lean body, and in all other things it resembleth a Horfe. The length of their ears serveth instead of their fore-top; their color is somewhat brown, but it varieth; for the *Roman* Cardinals have Mules of an ash-colour, and those very great ones with long tails.

They change their teeth, and have in number six and thirty, their neck is like the neck of an Asse, long, but not standing upright, their bellies simple and of one quantity, They want a gall like all four-footed Beasts; and there is a thing in their heart like a bone, as we have shewed before: in the story of the Afs.

They eat such food as Horfes, and Ases do; but they grow fat by drinking, yet they drink not like a Horfe, by thrusting in their noses into the water, but only touch it with their lips.

They love Cucumbers above all other meats, but the flowers and leaves of *Rhododaphne* are poyson to Mules and Ases, and to many four-footed Beasts. Both a Mule and a Horfe grow from the first coming forth of their teeth, (by which their age is discerned) and after all their teeth are come forth, it is hard to know their age. The females in this kinde are greater, more lively, and live longer then the males. It hath been found that they have lived to fourscore years of age. Such a one was presented at *Albany*, at what time *Pericles* builded the Temple of *Minerva*, where by reason of his age, he was dismissed from all labour, yet afterwards he would not forsake his companions, but went with them, exhorting them with neighing to undergo the labour cheerfully; whereupon there was a publick decree, that the said Mule should have an ordinary of provender appointed him in *Pyramion*, and that no body should drive him away from their Company when he eat it, although it were in the Market place.

We have shewed already that this Beast is engendered betwixt an Afs and a Mare, and therefore if a man would create unto himself a notable breed of Mules, he must look to the choice both of male and female. First of all for the female, that she be of a great body, of sound bones, and of singular good shape, wherein he must not so much expect her velocity or aptness to run, as her strength to endure labour, and especially to bear in her womb a discordant foal, begotten by an Afs, and to confer upon it both the properties of his body, and the disposition. For when Mares do unwillingly receive the genital seed of the Afs, the foal doth not grow to perfection in the Mares belly, until she hath born it thirteen months, whereby it resembleth more the sluggish and dull nature of his father, then the vigor of his mother. But for the helping of their copulation, they pull certain hairs out of the tail of the female, and afterwards binde them together therewith.

There is no lesser regard to be had of the Stallion, lest the want of judgement in the choice of him do frustrate the experiment; seeing therefore they are engendered betwixt a Mare and an Afs, or betwixt a Mare and a wilde Afs, and the Mule, begotten betwixt the wilde Afs and the Mare, doth excel all others, both for swiftness of course, hardness of foot, and generosity of stomach: yet is the tame Afs better for this breed then the wilde Afs, for he will be more beautiful in outward form, and more tractable in disposition; and the Mules engendered by wilde Ases may be compared to these; yet can they never be so tamed, but they retain some qualities of their wilde father; and therefore a Mule begotten betwixt them (I mean betwixt a wilde male Afs and a tame female Afs) are fitter for Nephews then for sons; that is, their foals may beget good Mules, and such as are tameable and tractable, because descent breaketh the corruption of nature, but themselves do never prove profitable.

And therefore it is most commodious and necessary to get such a Stallion Afs to the procreation of Mules, whose kinde by experiment is excellent, and outward parts every way acceptable, such as these are; a long and great body, a strong neck, strong and broad ribs, a wide breast full of muscles, loins full of sinews, strong compacted legs, of colour blackish or spotted, for the Mule colour is too vulgar, and is not fit in a Mule. For it is but folly in a man to allow and approve every colour he looketh upon, and therefore (*Columella* writeth) when there are spots upon the tongue and palat of a Ram, such also are found in the Wool of the Lamb he begetteth.

And so also if an Afs have divers coloured hairs upon his eye-brows, or upon his ears, the foal he bringeth forth hath such colours in his skin; And hereunto agree both *Palladius*, and *Calpistius*, saying; he that will have a good breed of Mules, must get an Afs of elegant form, a great stature, square members, a great head not like a Horfes, his face, cheeks, and lips not small, his eyes standing out of his head, and not little or hollow, broad nostrils, great ears, not hanging down, but standing upright; a broad and a long neck, a broad breast, rough with the plaights of his muscles,

P p

and





Pliny.

Miles in their several works, Cardan.

and thus the guiltiness of their own weakness, maketh them gentle against their wills, for otherwise they hate mankind, and are nothing so tractable as Horses. For Varro saith, that they have so much confidence in their heels, that by them alone, they kill Wolves when they come among them.

Mules were wont to be used for plowing, and for carrying both of men and burthens; but now in most parts of Europe, Judges and great Princes ride upon them until they be old, and then they sell them to the poor men, who turn them into the Mountains where they suffer them to run wild, till their hoofs be hardened for long travails, and then they take them up again. They have been also accustomed to ploughing, according to these verses;

*Quantum mularum sulcus praecedat in arvo,  
Tantum in praecurrit.*

For the Mules did plough more speedily, and come to the lands end more quickly than either the Ox or Horse. And Martial saith, that they were used in Carts to draw Timber, according to these verses;

*Vix, datur longae Mularum vincere mandras,  
Quaeq; trabumulto marmora sunt vides.*

They were also used in race at the games of Olympus, as we have already shewed in the story of the Horse, but that custom dyed quickly, because that the Arcadians could not endure Mules. The price of Mules was great, for Crispine (saith Juvenal) gave six thousand pieces of money for a Mule, and yet he saith it was not well worth six pound; the verses of Juvenal are these:

*—Crispinus Mulum sex milibus emit  
Equantem sane paribus segetibus libris,  
Ut perhibent qui de magna maiora loquuntur.*

The Cappadocians payed to the Persians every year besides Silver and Gold, fifteen hundred Horses, two thousand Mules, and fifty thousand Sheep; but the Medians payed twice so much. The dwarf fifth Miles called Gimi were also much set by, not for use, but only for delight, as dwarfs are kept in Noblemen's houses. When Pythiastus the son of Hippocrates first of all affected Tyranny at Athens, in Noblemen's houses. When Pythiastus the son of Hippocrates first of all affected Tyranny at Athens, in Noblemen's houses. When Pythiastus the son of Hippocrates first of all affected Tyranny at Athens, in Noblemen's houses.

To conclude this story of Mules, I do read in *Ellianus*, that Serpents do love to feed on the flesh of dead Mules; and two things are very eminent in the nature of Mules, one of their understanding, and the other of their friendship. Concerning the first, *Plutarch* relateth this story of a Mule that was accustomed to carry Salt; who upon a season going through a water, fell down underneath his burden, so that the Salt took wet afterwards; the Beast perceived how by that means, his team load melted away, and so became lighter and lighter; afterward the Mule grew to this stream load whensoever he came loaded with Salt over that water, he fell down in it for the easing of his carriage; his Master perceiving his craft, on a day he loaded him with Wool, and Spunges, and so the Beast coming over the water, fell down as he was wont to do with his Salt, and coming out of the water, he felt his load to grow heavier then it was wont to do, in stead of lessening, whereat the Beast much mused, and therefore never afterward durst lie down in the water, for fear of the like increase of his load. The other observation of their love and friendship, ariseth from the Proverb, *Mulum Muli scabunt*, that is, Miles scratch one another, and help one another in their extremity; from whence cometh our proverb, *On good turn asketh another*; and the Latin proverb, *Senes mutuum fricant*, old men rub one another, which did arise upon this occasion: as *Aelian* saith, the Emperor so passed a long on a day by a bath, he saw an old Soldier in the bath rubbing himself upon a Marble Stone for want of a man to help him, whereupon in pity of him he gave him maintenance for himself and a man: afterwards other old Soldiers seeing how well their fellow had sped, went likewise into the bath before the Emperors eyes, and rubbed themselves upon the Marble, thinking to get as much favour and liberty as their fellow had gotten, but the Emperor seeing them, and perceiving their fetches, bid them rub one another, and thereupon came that proverb. And thus much for the natural discourse of Mules, now followeth the medicinal.

#### The Medicines of the Mule.

Pliny.

The dust wherein a Mule shall turn or rowl himself, being gathered up and spread or sprinkled upon the body of any one who is ardently and fervently in love, will presently assuage and quench his

his inflaming desire. A man or woman being poisoned, and put into the belly of a Mule or Camel which is new killed, will presently expel away the force of the venom or poison, and will continue firm and make strong their decayed spirits, and all the rest of their members: For as much as the very heat of those Beasts is an Antidote or preservative against poison.

The skin or hide of a Mule being put unto places in any ones body which are burned with fire, doth presently heal and cure the same: it doth also heal sores and grievous ulcers which are not come unto impostumes.

The same is an excellent remedy for those whose feet are worn or wrung together through the pinching of their shoes, to help themselves withal, and for those which are lame, and those which are troubled with those grievous sores called *Fistulae*. If any man shall take either in meat or drink the marrow of a Mule, to the weight or quantity of three golden crowns, he shall presently become blockish and altogether unexpert of wisdom and understanding, and shall be void of all good nutriment, and manners. The ear-laps or ear-lages of a Mule, and the stones of a Mule being born and carried by any woman, are of such great force and efficacy, that they will make her not to conceive. The heart of a Mule being dried and mingled with Wine, and so given to a woman to drink after that she is purged or cleansed thirty times, hath the same force and power that the aforesaid medicine hath for the making of a woman barren. The same effect against conception hath the bark of a white poplar tree, being beaten together with the reins of a Mule, then mingled in Wine, and afterwards drunk up. If the herb called *Harts-tongue*, be tied upon any part of a woman, with the spleen of a Mule, but as some have affirmed by it self only, and that in the day which hath a dark night, or without any Moonshine at all, it will make her altogether barren and not able to conceive. If the two stones of a Mule be bound in a piece of the skin of the same Beast and hanged upon any woman, they will make that she shall not conceive so long as they shall be bound unto her. The left stone of a Weasel being bound in the skin or hide of a Mule, and steeped or soaked for a certain space or time in Wine, or in any other drink, and the drink in which they are so soaked given to a woman to drink, doth surely make that she shall not conceive. The stones of a Mule being burned upon a barren and unfruitful tree, and put out, or quenched with the stale or urine of either Man or Beast which is gelded, being bound and tyed in the skin of a Mule, and hanged upon the arm of any woman after her menstrual fluxes, will altogether resist and hinder her conception. The right stone of a Mule being burned and fastened unto the arm of a woman which is in great pain and travail, will make that she shall never be delivered until the same be loosened and taken away; but if it shall happen that a Maid or young Virgin shall take this in drink after her last purgation or menses, she shall never be able to conceive, but shall be always barren and unfruitful.

The matrix or womb of a female Mule taken and boiled with the flesh of an Ass or any other flesh whatsoever, and so eaten by a woman which doth not know what it is, will cause her never to conceive after the same. The worm which is called a Glowworm, or a Globird, being taken out of the womb or matrix of a female Mule, and bound unto any part of a womans body, will make that she shall never be able to conceive.

The dust or powder which proceedeth from the hoofs of a male or female Mule, being mixed or mingled with Oyl which cometh from Myrtle-berries, doth very much help those which are troubled with the Gout in their legs or feet. The dust of the hoofs of a Mule being scorched or burned, and the Oyl of Myrtle-berries being mingled with Vinegar, and moist or liquid Pitch, and wrought or tempered in the form or fashion of a plaister, and opposed or put unto the head of any one whose hairs are too fluent and abundant, doth very speedily and effectually expel the same.

The liver of a Mule being burned or dried unto dust, and mixed with the same Oyl of Myrtle-berries, and so anointed or spread upon the head, is an excellent and profitable remedy for the curing of the aforesaid enormity.

The dust or powder of the hoofs of a female Mule is very wholesome and medicinal for the healing and curing of all griefs and pains which do happen or come unto a mans yard, being sprinkled thereupon. The hoof of a Mule being born by a woman which is with child, doth hinder her conception. The fifth of uncleanness which is in the ears of a Mule, being bound in the skin or hide of a little or young Hart, and bound or hanged upon the arm of a woman after her purgation, doth cause that she may not conceive. The same being in like manner mingled or mixed with Oyl which is made of Beavers-stones, doth make any woman to whom it is given to drink, altogether barren. The dirt or dung of a Mule being mixed with a Syrup made of Hony, Vinegar, and Water, and given to any one to drink that is troubled with the heart-swelling, will very speedily and effectually cure the pain thereof.

The dung of a Mule being burned or dried and beaten small, and afterwards sifted, or seived and washed or steeped in Wine, and given to any woman to drink, whose menstrual fluxes come forth before their time, will in very short space cause the same to stay. The stale or urine of a male or female Mule being mingled with their dirt or dung, is very good and medicinal for those to use which are troubled with corns and hard bunches of flesh which grow in their feet. The stale being mingled with the urine of a Mule to the quantity of a bean, and drunk, will altogether be an impediment and hindrance to the conception of any woman. The stale or urine of a Mule being taken Rast, to the quantity of eight pounds, with two pounds of the skin or refuse of silver, and a pound of old and moist clear Oyl, all these being beaten or pounded together until they come to the thick-

nests

Agrieta.

nets of the fat or sweat which falleth from mens bodies and boiled until they come unto fo liquid and thin a juyce, that they will speedily and effectually cure and help those which are troubled with the Gout or swelling in the joynts.

Rofit.  
Mucibus.

If a woman shall take the sweat which proceedeth from a Horfe, and anoint it upon a Woollen cloth, and so apply it as a plaister or suppository unto her secret parts, it will make her altogether barren. There is an excellent remedy for those which are purile or short-winded, which cometh also by the Mule: which is this; To take or gather the froath or some of a Mule, and to put it into a cup or goblet, and give it in warm water, for a certain space or time to be drunk; either to the man or woman which is troubled with this enormity, and the party which do so use it, shall in short space have remedy; but the Mule will without any lingering of time, or continuing of time in pain and sorrow die.

Pliny.

The milke of a male or female Mule, being drunk in a portion or juyce made of Honey, Water, and Vinegar, to the value or quantity of three cruces or cups full, is commended for an excellent cure and medicine, for those which are troubled and grieved with that pestiferous and deadly disease called the Falling-sickness, otherwise *Saint Johns Evil*. There is an excellent remedy for those which are troubled in the voiding of their water, which is this; To take the Ring-worms or Tenets which do grow upon both the legs of a Mule above their knees, and which do stick thereupon in the manner of a dried thick skin, and to burn or parch them, and afterwards to put or place them upon him which is troubled with the Strangury, or cannot void his water but by drops-mel, so that there be great care had to cover close with cloven or clefted cloaths, or garments the suffumigation thereof, lest that the smell or fume do fade, and void away, and this being so used will be very effectual for the curing and driving away of the aforesaid disease.

Trallianus.

The hairs of a Mule and an Ass being mingled together and dried, and put into some certain perfume, and so given to any one to drink which is troubled with the Falling-sickness, will presently expel and drive it quite away. In the place or part of mans body wherein a male or female Mule shall bite, *Panzettum* affirmeth, there will presently arise, and grow small pustules, or little blisters which are always full of red and pale humors, and filthy corruption, which cannot be healed and cured by no salve, potion, or medicine, by any means applied thereunto. There are some also which do suppose the biting of Mules to be payson, for truly there doth not only follow low those aforesaid pustules and bites; but also an extreme and almost indurable inflammation and burning, through all the parts of the body, which doth greatly disfigure and vex the same.

But it is affirmed by others, that the biting of Mules is to be cured after the same manner as the biting of a Cat, which is thus: First, to wash and clarify the wound or bitings where the corruption is with Vinegar mingled with Oyl of Roses; and then to take Penny-royal, or the herb called Neppe, and boil it, and stroke or rub the wound very softly with it, and it will in time wholly cure it. And thus much shall suffice at this time concerning the cures and medicines of Mules.

## Of the Neader, Neider, or Naiden.

**H**eracleides, Catellus, Volaterranus, and Euphorion, do all write that once the Nile of Egypt was in Desert place, and that there were in it certain Beasts called Neader, whose voices were so terrible that they shook the earth therewith, and from those strange and great voices came the vulgar Greek proverb, *Melazon mia toon Neadon, melius uno Neaden*. Thus, One of the Neades was a great wonder, for it was used in ostentation to shew that there was nothing in the whole world comparable to their vast and huge quantity. Of the parts of these Beasts there is no memory but only in parable to their vast and huge quantity. Their bones were to be seen in their days. And this title I *Suidas* and *Albius*, who affirm, that their bones were to be seen in their days. And this title I thought good to infer into this History, leaving the Reader to consider, whether he will think it for Elephants, or for any other greater Beast; for my opinion is it is false, I think them rather (if there ever were any such) that they were Elephants of greater stature than ever lived were, and that no generation of Beasts now left and utterly perished.

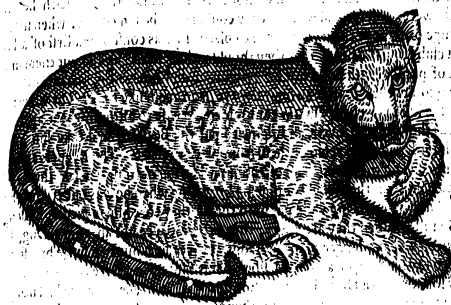
## Of the Ounce, the description whereof was taken by Doctor Cey in England.

The names of this Beast.

The description of D. Cey.

**T**here is in Italy a Beast called *Alphit*, which many in Italy, France, and Germany call *Unce*, and some *Unce*, from whence *Alphit*, and *Unce* make the *Unce* word *Unce*, and it is to be the same Beast which is called *Unce*, and so the description of it, I have followed the Author then Doctor Cey, who describeth it in this manner: It is a Beast of a very terrible figure, his face and ears like to a Lions, his body, tail, feet, and nails like a Cat, of a very terrible figure, his teeth so strong and sharp, that he can even cut Wood in funder with them; he hath also in his nails so great strength, that he only fighteth with them, and such them for his greatest strength. The colour of the upper parts of his body being like whitish Oak, the lower being of the colour

of ashes, being every where mixed with a black and frequent spot, but the tail more black than the rest of his body, and as it were obscured with a greater spot than the residue. His ears within are pale without any blackness, without black, without any paleness, if you do but take away one dark and yellow spot in the midst thereof, which is made of a double skin rising, meeting in the top of the ear, that is to say, that which ariseth from the outward part of the jaw on the one side, and cometh from the upper part of the head on the other side, and the same may be easily seen and separated in the head being dried.



The rest of the head is spotted all over with a most frequent and black spot (as the rest of the body) except in that part which is betwixt the nose and the eyes, wherein there are none, unless only two, and they very small: even as all the rest are lesser than the rest, in the extremest and lowest part: the spots which are in the upper parts of the thighs, and in the tail, are blacker and more singular, but framed in the sides with such an order, as if all the spots should seem to be made of four. There is no order in the spots, except in the upper lip, where there are five rows or orders.

In the first and uppermost two which are severed; in the second, six, being joined in that manner, as if they should seem to be in one line. These two orders are free, and not mingled amongst themselves. In the third order there are eight joined together, but with the fourth where it endeth, they are mixed together. The fourth and fifth in their beginning (which they have to the nose) being separated with a very little difference, do forthwith join themselves, and run together through all the upper lip, and do not make a spot through all the same, but a broad line. In the Beasts being dead the spots do so stand, (as I suppose) for the contraction of the skin. In the Beasts being alive, those spots do seem separated every one in their own orders. In the very middle between the lower lip, although they do keep the quantity, do not observe the order. The nose is blackish, a line being softly led through the length, and only through the top of the outside thereof. The eyes are gray, the former teeth are only six, not very unlike to mens teeth, except those which are placed in the middle are lesser, and they in the uttermost part are greater, as also higher than those which are low.

In this Beast the teeth are both great, sharp, and long, being joined to the rest in the lower jaw, and in the upper severed with so great space, that the lower teeth may be received therein. These when the Beast liveth are covered with his lips, but when he is dead they are otherwise, his lips being through drinels shrunk together. His fore-teeth are very big, and as long as two Roman fingers, for at the very root thereof it cannot be comprehended in less than two Roman fingers and a half compass. In his tooth there is a certain small hollowness through all the length thereof, which notwithstanding doth not appear except the tooth be broken. The lower jaw is very hard and stiff having three teeth unequal in quantity, as the upper four. Between the great tooth and the first cheek tooth of the lower jaw, there is a void space to the quantity of one finger, from which the fifth is presently placed, lesser than the other two: to this there is another greater close adjoining; and after this there is also a third greater than the second. In the upper jaw in that middle space (which I said was of one Roman finger) between the great tooth and the first cheek-tooth, there is a very little tooth, and without any form, coming so finally out of the jaw, that there is no lower tooth which may answer to the same. After that, in the space of half a finger there is a second, to which there is joyn'd a third, and after this a fourth, between themselves the upper and the lower cheek-teeth, and so are joined together as they agree in the manner of a comb; the two first teeth in the lower jaw, and the second and third in the upper jaw are of the same figure, as the compass of the tops of the Crowns of the Kings of England and France. The third is of the same figure in the lower jaw, and the fourth of the upper jaw, except that the interior side of both the gums



**The meat and  
nature.**

gums which is nearer to the throat; by nature is taken away. There was no other teeth joyned to these in both the jaws. But I do not know whether there be any more teeth in the gum beyond the reach of ones finger, in the farthest row or behind the teeth. But this I know, that to all appearance there was none remaining, and it may be that his lips were cut or slit down beyond nature to shew his teeth. "It liveth of flesh, and the female is more cruel than the male though less fer, and if either sex was brought out of *Mauritania* into England in a Ship, for they are bred in *Lybia*. One of they have any appointed time of copulation, it is near the month of *June*, for in that month the male covereth the female. We have shewed already that Lions may be tamed, for in that month all hath been manifest in *London*, both in the Tower and in the City, for there the Lions and that also hath been manifest in *London*, both in the Tower and in the City, for there the Lions did play with their Keepers, and kiss them without harms, (as Doctor *Orch* saith he saw them do) but these Beasts were so fierce and wilde as they could never be tamed, for whensoever their Keeper should change or remove them from place to place, he was constrained first of all to strike them so hard with a club upon the head, that they should lie half dead, and so put them in a sack or wooden chest made of purpose with holes in it for respiration and expiration, to carry them to and fro from one lodging to another; after an hour they revived again like a Cat, but when they were to be taken out of the hutch or chest, he was constrained likewise to althorn them again with his club; but afterwards they grew to invent an Engine to put the Beast in, and take him out of the hutch with a rope or cord, and so do remove them from place to place. The Keepers affirmed, that they did seem much to disdain the Lions, and oftentimes endeavourd to fight with them, but they were kept afunder with grates: they would not hurt a little Dog when he was put to them but when they were hungry; but a great Dog were put into them, they tore him in pieces although their bellies were never so full. When they are angry, they utter a voyce like an angry Dog, but they double the (*Arr*) twice, and also bigger then any Dogs, proceeding out of a large breath and wide arteries, much like to the howling of a great Mative, that is shut up in a close room alone against his will. Some say it is longer then a Dog, but it did not so appear in *England*, for we had many Mative Dogs as long as it, but yet was it every way greater then any other kind of Dogs. It was but a vain report, that some have said, when a Man or Beast is bitten with an Ounce, presently Mice Run out of him, and poyson him with their urine. Some say it is a kind of Mice, and sheweth bitten by one of

him, and poyson him with their urine.

For it was seen in *England*, that two of the *Keepers* were wounded and shrewdly bitten by one of the *Ounces*, and there followed them no other harm then that which followeth the biting of an ordinary Dog, or like a small incision with a knife. He never fighteth but at the head, and that treacherously, if he perceive his adversary to be too strong or too great for him, and that by countering quietly, benevolence and peace; as if he meant no harm: for so he served a great *Mastive Dog* in *England*, at the first fight he seemed to applaud his coming, looking cheerfully upon him, and wagging his tail, presently he fell down on his belly, as if were to invite the Dog to come near him by his submision; lastly, he got close unto him, creeping as though he would play with him, putting out one of his feet, as Cats do when they play, wherewithal the great Dog grew secure, and began nothing to mistrust the Beast, at length when the Ounce saw his opportunity, he suddenly leaped upon his neck, and took him by the throat; and pulled it out, after he had killed him, with his nails he opened the Dogs breast, and taking out his heart, did eat it before all the people in most cruel manner; thus far Doctor *Cray* speaketh of the Ounce, and befide him no other Author that I know.

The gall of this Beast is deadly poyson, it hateth all creatures, and destroyeth them, especially men; and therefore it may well be said to be possessed with some evil spirit. It loveth none but his own kinde. And thus much for the Ounce.

Of the *ORTX*.

**T**His Beast in *Pliny* and *Oppianus* is called *Oryx* and *Oryx*, and my conjecture is, that his name is derived from *Oryssin* which signifieth to dig. *Saint Jerome* and the *Septuagints* for *Theo*, *Deut.* 14. and *Ista* 51. translate *Oryx* : but *David Kimbly*, and the better learned men interpret it a wild Ox. but the *Hebrew Dischon* may in my opinion be so translated, yet herein I refer it to the learned Reader.

It is certain, that it is of the kinde of wilde Goats by the description of it, differing in nothing but this, that the hair groweth averfe, not like other Beasts, falling backward to his hinder parts, but forward toward his head, and so also it is affirmed of the *Ethiopian* Bull, which some say is the *Rhinocerot*. They are bred both in *Lybia* and *Egypt*, and either of both Countries yieldeth testimony of their rare and proper qualities. In quantity it resembleth a Roe, having a beard under his chin. His colour white or pale like milk, his mouth black, and some spots upon his cheeks; his back-bone reaching to his head, being double, broad, and fat; his horns standing upright, black, and so sharp, that they cannot be blunted against brags or iron, but pierce through it readily.

*Aristotle* and *Pliny* were of opinion, that this Beast was *Bifolius* and *Unicornis*, that is, cloven-footed, and with one horn: The original of their opinion, came from the wilde-one-horned-goat, whereof *Soboburgensis* a late Writer writeth thus: *Certum est minime quod dubium in Carpalio bene, per Russiam Transylvaniamque* reperiri *feras familes omnino rupicaprae, excepto quod unicam ceruicem in media fronte enascitur, nigram, dorso inflexam, simile omnino rupicaprarum cornibus*, that is to say; It is without

out all controversy, that there are **wild Beasts** in the Mountain *Carpathus*, towards *Russia* and *Transcaucasia*, very like *Goats*, except that they have but one horn growing out of the middle of their heads, which is black and bending backward like the horns of wild *Goats*. But the true *Oryx* is described before out of *Oppianus*, and it differs from that of *Pliny*, both in stature and *horns*. *Smith* says that the *Oryx* hath four horns; but he speaks of the *Indian Oryx*, whereof there are some yearly presented to their King, and it may be both there and elsewhere, diversity of regions do breed diversity of stature, colour, hair, and horns. *Simon Sethi* affirmeth of the *Muskrat*, that it hath one horn, and it is not unlikely that he hath seen such an one, and that the *Oryx* must be the same.

By concerning their horns, it is related by *Herodotus*, *Pellus*, and *Laur. Valla*, that there were made instruments of music out of them, such as are Citherns or Lutes, upon whose bellies the Musicians played. *Pliny*, by taking them with their hands, and that those Beasts were as great as Oxen; and all this may be true, notwithstanding we have shewed already, that they are as big as Roes, for *Pliny* speaking thereby relation, or by fight, it is likely that he had seen a young one.

There be also Sea-beasts called *Oryges*, and *Oryx*; and there in *Egypt* an *Oryx*, which at the rising of *Geminus Syrius*, or the little Dog is perpetually burrowful; and this cattle the *Lybians* to mock the *Egyptians* for that they fable, the same day that the little Dog-lark riseth, their *Oryx* speaketh. But on the contrary themselves acknowledge, that as often as the said Star ariseth with the Sun, all their Goats run to the East, and look upon it; and this observation of the Goats, is as certain as any rule of the Astrologers. The *Lybian* affirm more, that that they do prefigure great store of rain, and change of weather.

The Egyptians also say, that when the Moon cometh near to the East, they look very intently upon her, as upon their soveraign Goddess, and make a great noise, and yet they say they do it not for her love, but for her hate, which appeareth by knocking their legs against the ground, and fastening their eyes upon the earth, like them which are angry at the Moons appearance: And the self same thing they do at the rising of the Sun.

For which cause the ancient Kings had an obſerver, or one to tell them the time of the day, ſitting upon one of theſe Beasts, whereby very accurately they perceived the Sun riſing; and this they did by turning their tail againſt it, and emptying their bellies; for which cauſe by an Oryx the Egyptian diſciphin an impure or godleſs wretch: for ſeeing that all creatures are nourished by the Sun and Moon, and therefore ought to rejoyce at their appearing, only this filthy wretch diſdaineth and ſcorneth them.

The reason why they rejoyce at the little Dog-star, is, because their bodies do perceive an evident alteration of the time of the year, that cold weather and rain are over-passed, and that the vapors of the warm Sun are now descending upon the earth, to clothe it with all manner of green and pleasant herbs and flowers.

There is another kinde of Oryx which according to *Columella*, was wont to be impaled among Deer and Harts, the flesh whereof was eaten, and used for the commodity of his Master: This was impatient of cold. It grew till it was four years old, and afterwards through age decreased, and loit all natural vigor.

to return to the Oryx intended, from which we have digressed; their horns whereof we late  
 spoke, are not only strong and sharp like the horn of the Unicorn, and the Rhinoceros, but also firm,  
 and not hollow like the horns of Harts. The courage and inward disposition of this Beast, is  
 both fearful, cruel, and valiant; I mean fearful to Men and Beasts, but fearless in it self: For  
 faith my Author; *Neq; quia Cæcis lacrima timet, neq; effrorescentem feriat, neq; latui  
 respici, neq; Pambægram, trifidem sceler, neq; ipsius Leonis vehemens rugitum horret, neq; imi  
 numis roge mouetur, ac seperebustum venatorem excidit:* That is to say; He feareth not the barking  
 of the Dog, nor the foaming wrath of the wilde Boar; he flyeth not the terrible voyce of the Bull,  
 nor yet the mournfull cry of the Panthers; nor the vehement roaring of the Lion himself; and  
 to conclude, he is not moved for all the strength of man, but many times killeth the valiantest hunter  
 that pursueth him.

When he seeth a Boar, a Lion, or a Bear; presently he bendeth his horns down to the earth, whereby he conformeth and establisheth his head to receive the brunt, standing in that manner until the assault be made: at which time he easily killeth his adversary, for by bending down his head, and setting his horns to receive the Beasts, he becometh himself as skilfully as the Hunter, that receiveth a Lion upon his spear. For his horns do easily run into the breasts of any wilde Beast, and so piercing them, causeth the blood to issue, wherat the Beast being moved, forgetteth his combate and falleth to kicking up his own blood, and so he is easily overthrown. When the fight is once begun, there is none of both that may run away, but standeth it out until one or both of them be slain to the ground, and so their dead bodies are found by wilde and savage men. They fight with all, and kill one another, also they are annoyed with Lincies, I mean the greater Lincies: of the cruelty of this Beast *Merrill* made this dictichon:

*Matutinarum non ultima praeda ferarum  
Sævis Oryx, constat qui mihi morte canum.*











The taming of Panthers.

a Panther; for we have shewed already how he doth cover both his head and his body to take his prey.

This Beast is never so tamed but that he falleth into his wilde fits again. Their love to their young ones exceeding great, for if at any time while they are abroad to forage, they meet with Hunters that would take them away, they fight for them unto death, and to save them from blows, interpose their own bodies, receiving mortal wounds, but if they finde their young ones taken out of their den in their absence, they bewail their loss with loud and miserable howling.

Demetrius the Philosopher, relateth this story of a Panther, that lay in the high way to meet with a man to help her young ones out of a ditch or deep pit wherein they were fallen, at length there appeared in her sight the father of *Philus* a Philosopher, who presently began to run away as soon as he saw the Beast; but the poor distressed Panther rowled after him in humble manner, as though she had some lute unto him, and took him lightly by the skirt of his garment with one of her claws: the man perceiving that she gave suck by the greatness of her Udders hanging under her belly, began to take pity upon her, and layed away fear, thinking that indeed which happened, that her young ones were taken from her by one means or other; therefore he followed her, the drawing him with one of her feet unto the cave wherinto her young ones were fallen; out of which he delivered them to the mother as ransom for his own life, and then both she and the young ones did follow him rejoicing, out of the danger of all Beasts; and out of the Wilderiness, dismissing him without all manner of harm, which is a rare thing in a man to be so thankful, and much more in a Beast: and unto this story of their love and kindness to their young ones, I may add another, worthy to be remembered out of *Aelianus*.

A notable story of a Panther loves to his companion.

There was (saith he) a man which brought up a tame Panther from a whelp, and had made it so gentle, that it refused no society of men; and he himself loved it as if it had been his wife. There was also a little Kid in the House brought up tame, of purpose to be given unto the Panther when it was grown to some stature or quantity, yet in the mean season the Panther played with it every day: at last it being ripe, the Master killed it, and laid it before the Panther to be eaten, but he would not touch it, whereupon he fasted till the next day, and then it was brought unto him again, but he refused it as before; at last he fasted the third day, and making great moan for meat, according to his usual manner, had the Kid laid before him the third time; the poor Beast seeing this nothing would serve the turn, but that he must either eat up his chamber-fellow, or else his Master would make him continually fast, he ran and killed another Kid, disdaining to meddle with that which was his former acquaintance, yea though he were dead; herein excelling many wicked men, who do not spare those that have lived with them in the greatest familiarity and friendship, to whom they overthrow them alive for the advancement of themselves.

The harms of Panthers.

We have said already, that they most of all resemble Women, and indeed they are enemies to all creatures. The Leopards of *Barbary* do hate both to men that they meet, except they meet them in some path way where the man cannot abate the Beast, for the Beast the Man, there they leap most fiercely into his face, and pull away as much flesh as they can lay hold upon, and many of them with their nails do pierce the brains of a man.

Leo. Afr. Albertus. Avicenna.

They use not to invade or force upon flocks of Sheep or Goats, yet wherefore they see a Dog, they instantly kill and devour him. The great Panther is a terror to the Dragon, and so soon as the Dragon seeth it, he flyeth to his cave. The lesser Panthers or Leopards do overcome Wolves being single, and hand to hand as we say, but by multitude they overcome and destroy him, for he endeavour to run away, yet they are swifter and easily overcome it.

Pliny. Orus.

There is also great hatred and enmity betwixt the Hyena and the Panther, for in the presence of the Hyena, the Pardal dareth not resist; and that which is more admirable, if there be a piece of Hyena's skin, about either man or beast, the Panther will never touch it, and if their skins alter they be dead be hung up in the presence of one another, the hair will fall off from the Panther; and therefore when the Egyptians would signify how a Superior was overcome by a Inferiour, they picture those two skins. If any thing be appointed with broth wherein a Cock hath been cooked, neither Panthers nor Lions will ever touch it, especially if there be mixed with it the juice of Garlic.

Pliny. Rastus. Aesculapius.

Leopards are afraid of a certain tree called *Leopardi arbor*, Leopardi-tree. Panthers are also afraid of the skull of a dead man, and run from the sight thereof: yet it is reported, that two years before the death of *Francis King of France*, two Leopards, a male and a female were taken in *France* into the Woods, either by the negligence or the malice of their Keepers, that a male and a female, and about Orleans were in pieces many men and women; at last they came and killed a Bride, which was that day to have been married; and afterward there were found many carcasses of Women destroyed by them, of which they had eaten nothing but only their breasts: such like things I might express many in this place, whereby the vengeance of Almighty God against mankind for many sins, might seem to be executed by the raging ministry of wilde, savage, and ungentle Beasts.

Laws against Panthers.

For this cause we read in ancient times how the Senators of *Rome* gave laws of punishment against them that should bring any Panthers into *Italy*, especially any *African* Beasts: and the first that gave dispensation against those laws was *Caesar Augustus*, the people of *Triplina*, who permitted them for the sake of the *Circenian* games: and then *Staurus* in the office of his edility brought also in an hundred and fifty: After him *Pompey* the great, four hundred and ten; and lastly *Augustus* the great, remem-

remembered and renowned Emperor, four hundred and twenty. Thus laws which were first made by great men and good Senators, for the safety of the common-wealth, became of no great value, because as great or greater: then the Law-makers, had a purpose to advance themselves by the practice of those things which law had justly forbidden: for if those decrees had stood effectual, as the victorious Champions had lost that part of their vain triumphs, so many people had afterward been preferred alive, who by the cruelty of these Beasts were either torn in pieces, or else received mortal wounds.

It was not in vain that the blessed Martyr of *Jesus Christ* *Ignatius*, who was afterwards torn in pieces by wilde Beasts at *Rome*, did write thus in his Epistle to the *Roman* Christians concerning his handling by the *Roman* Souldiers, as he was brought prisoner out of *Syria* to *Rome*. *A Syria Roman usque cum bellis depugnavit terram & mare, die nocteque vincit cum decem Leopardis, hoc est cum militari crudelitate, quae ex beneficiis destruitur sumit.* From *Syria* (saith he) to *Rome* I have fought with Beasts, being night and day held in bondage by ten Leopards, I mean ten Souldiers, who notwithstanding many benefits I bestowed upon them, yet do they use me worse and worse: and thus much for the cruelty of Panthers and Leopards.

The nature of tamed Panthers.

We have shewed already how they becom tame, and are used in hunting, unto which discourse (somewhat out of the place) I will add a true narration of two Panthers of Leopards nourished in *Italy* for the King, whereof one was of the likeness of a great Calf, and the other of a great Dog, and that on a day the lesser was brought forth for the King to behold how tame and tractable he was, and that he would ride behind his Keeper upon a cloth or pillow being tyed in a chain; and if he had been let loose in his presence, and he turned about to her, within a few jumps or leaps he would attain and take her: When the Keeper was to take up the Leopard again, he did come to him backward, lest if he should see his face, he should leap upon him and wound him, (for as we have said they are angry being chased, and are ready to fly into the Hunters face) therefore he turneth his face away from him, and bewixt his legs reacheth him a piece of bread or flesh, and so he gently taketh him into his chain and collar again, leading him away to his house, and as soon as the man was mounted the Beast also knew his seat, and leaped up after him.

And the same party also related, that when as a Lion was turned forth to a Bull, the Lion very quietly without stirring lay down and did no harm, or offer any violence or combat with the Bull; but afterward when as the two Leopards were turned forth to the same Bull, they instantly ran and took the Bull by the throat, and without all doubt they had strangled and pulled out his throat, had not their Keepers which had long chains cycled about their necks in their hands restrained and pulled them off again. By this may be conjectured how great is the rage of the wilde and untamed Leopards and Panthers; seeing the tame and gentle are so cruel; and therefore the Lord in the Prophets did most wisely compare the siege of the *Affrians* about *Jerusalem* to a Leopard, watching at the gates of the City to destroy all that came out thereat.

The taking of Panthers.

Having thus discoursed of the nature, parts, kindness, love, and hatred of these Beasts in general, I now followeth to express the best means to avoid and destroy them, that so we may not only know our enemy, but also learn the way to overcome and curb him.

Disorder.

There is a kinde of Herb called *Pardalanchet* or Leopardi-bane, which the Inhabitants of *Parthia*, and the Mount *Ida*, were wont to lay in the Mountains for the destroying of Leopards, Pardals, and Panthers. This herb is not much known in this day, yet I take it to be the same which groweth in many places of *France*, and *Savoy*, and it is called *Tora*, by the root thereof beated to powder, and stropped up in flesh, not only Beasts, but also Wolves and Swine, as wilde Boars are destroyed if they take thereof: when the Beast perceiveth himself poysoned, presently he seeketh for mans dung, for without that he cannot be delivered; wherefore the Hunters do also place near unto it some vessel of it hanging in a tree, with the mouth or way open that leadeth into it, whereby the greedy Beast leapech, and being in, cannot get forth again, but rather dyeth with hunger, or else is taken and killed; or else the vessel is hanged up so high, that the Beast by stretching himself to leap into it, and get his desired medicine, (but all in vain) spendeth out the time of his recovery, till the poyson hath thoroughly corrupted his body, and every part and member, for otherwise to great the life, spirit, and stomach of this Beast, that he will fight and be yeeld to his adversary, although his guts and entrails hang about his legs out of his belly.

Pliny. Aristotle.

Therefore the Panthers of *Arabia* do more often perish by poyson than by other violence of Swords, Spears, or Dogs; for by this poyson the Beast many times falleth to such a looseness of his belly, and withall such a weakness thereby, that he is taken alive. Likewise in *Armenia* there are certain Fishes which are poyson to Lions, Bears, Wolves, Lynxes, and Panthers, the powder of this Fish the Inhabitants put into the fides and flesh of their Sheep, Goats and Kye, without all harm to their beasts; but if the Panthers or any ravening Beast come and devour any of those Sheep so dressed, presently they die by poyson.

When they are hunted and forced in the presence of the Hunters, then they leap directly upon their heads, and therefore the Hunter taketh great care both of his standing and also of holding his spear, for if he receive not the Panther in his leap, and gore him to the heart, or else otherwise wound him mortally, he is gone; and his life is at an end. *Oppianus* also sheweth, that he is taken as Lions are, especially by these means following; for when the Hunters perceive the way or path which he useth to his water, then they make a deep ditch (but not so great as they make for a Lion) wherein they erect a wooden pillar or great post, unto that they tie certain engines, and withall

withall a male little Dog, whose Stones or tender cuds they binde with some string or cord, so as the young beast may whine and cry for pain, by which voyce he inviteth and calleth the Panther to his destruction; For the greedy beast winding the voyce of the Dog, bestirreth himself to meet with his desired prey or booty; at last finding the ditch, and seeing the Dog down, he leapech, where the engins take present hold upon him and destroy him; and so he describeth the same means to take great fishes by the sight of little fishes swimming in a Net.

Oppianus.

In hunting of wilde beasts the wary Wood-man must make good choice of his Horse, not only for the metal and agility which are very necessary; but also for the colour, as we have already expressed in the story of the Horse for the gray Horse is fittest for the Bear, and most terrible to him; the yellow or fire colour against the Bore, but the brown and reddish colour against the Panther.

The Moors also use other devises to take Panthers and all such noisome beasts, they entlose in a little house certain rotten flesh, which by the savour thereof when it stinketh, draweth the wilde beasts unto it: For they make a dore, or a gate of reeds unto the said house, through which the filthy smell breaketh out and dispereth it self into the wide air; presently the wilde beasts take it up, and follow it with all speed they can, for there is not any Musk or other sweet thing wherewith men are so much delighted, as ravening beasts are with the savour of carrion: therefore like an amorous cup it draweth them to the snare of perdition: for beside the rotten flesh, they erect many engins and unavoidable traps to snare in the beast when he cometh to raven.

The Christians of *Africk* did institute a general hunting of Leopards, inclosing the ends of the ways through which the beasts were to pass: The Leopard when he was stirred ran to and fro distracted, because in all his passages he found Horse-men ready to resist him, neither left they any way for him to escape: at length wearied with many windings, turnings, and provocations, the Horse-men might easily come unto him and pierce him with their spears: but if it fortuned that the Leopard escaped, and brake away from the Hunters; then he at whole corner he brake forth, and bound by ancient custome to make the residue a dinner or banquet.

Among the *Chaldeans*, there was a certain young Nobleman which loved a Virgin called *Antippe*, the which two lovers were walking together a good season in a Wood; It happened while they were there, that *Cleonymus* the Kings Son prosecuted a Pardal in hunting, which was fled into that Wood, and seeing him, bent his arm against him and cast his Dart: the which Dart missed the mark and killed the Virgin *Antippe*, the young Prince thought that he had slain the beast, and therefore drew neer on Horse-back to rejoice over the fall of the game; according to the manner of Hunters; but at his approach he found it far otherwise, for in stead of the effusion of the blood of a beast (that which was more lamentable) his right hand had shed the blood of a Virgin: For when he came to them he saw her dying and drawing her last breath, and the young man held his hand in the wound to stanch the blood; for sorrow whereof, he presently fell distracted in his mind, and ran his Horse to the top of a sharp Rock, from whence he cast down himself headlong and so perished.

The *Chaldeans* after they understood this fearful accident, and the reason of it, compassed in the place where he fell with a wall, and for the honour of their dead Prince builded a City where he lost his life, and called it *Cleonymus* after his own name.

Their love of Wine.

Leopards and Panthers do also love Wine above all other drink, and for this cause both *Bacchus* was resembled to them, and they dedicated to him: *Bacchum sacro affmilant & Pardali*, quid vestitus chry. *belluorum istarum ingenia referant, & omnia violenter agant, quidam enim traxerunt fimum Taurum in sinistram, & pinguetis feris, in Pardales*, saith *Plato* in his second Book of laws, they resemble and compare *Bacchus* to a Bull, or Pardal, because drunken men in all their actions do imitate the disposition of these wilde beasts, both in their folly and violence: For some of them are wrathful like Bulls, and some of them wilde apt to fight, like Pardals: *Bacchus* was also called *Nebriades*, because he wore the skin of a Hinde, which is spotted almost like a Panther: and therefore a fearful man, or a drunken, variable and inconstant man, is said to wear a skin of divers colours; but the chief cause why Panthers were dedicated to *Bacchus*, was for their love of Wine; for all Writers do constantly and with one consent affirm, that they drink Wine unto drunkenness: the manner and end thereof is elegantly described by *Oppianus* in this sort: When the Inhabitants of *Lybia* do observe some little fountain arising out of the land, and falling down again, (as in the manner of small Springs which cannot encrease into great Rivers) whereat the Panthers and Pardals use to drink early in a morning, before it be light; after they have been at their prey in the night time, the Hunters come and pour twenty or thirty pitchets of old sweet Wine into the said Fountain: then a little way from it they lie down and cover themselves with clothes, or with straw, for there is no shelter either of tree or bushes in that Countrey.

In the morning the Panthers ardently thirsting, and being almost dead for want of drink, come unto the same fountain, and tasting of the Wine drink thereof great abundance, which presently falleth to work upon their brains, for they begin first of all to leap and sport themselves, until they be well wearied; and then they lie down and sleep most soundly, as which time the Hunters that lye in wait for them, come and take them without all fear or perill: Thus saith *Oppianus*.

Use of their parts.

Concerning the use of their several parts, I finde little among the ancients, except of their skins, for the foot-men and ancient Soldiers of the *Moses* did not only wear them for garments, but also

legs

slept upon them in the night time. The Shepherds of *Ethiopia*, called *Agrionbachi* do eat the flesh of Lions and Panthers, although it be hot and dry.

## The Medicines of the Panther, or Leopard.

If the skin or hide of a Leopard being taken and flead, be covered or laid upon the ground, there is such force and vertue in the same that any venomous or poysonsome Serpents dare not approach into the same place where it is so laid. The flesh of a Panther being roasted or boiled at the fire and smelled by any one which is troubled with the Palisie, or shaking in the joynts, as also by them which are troubled with the beating and continual moving or turning of the heart, is a very profitable and excellent remedy for the same.

Avicenna.

Albertus.

The same fat or sewer of a Leopard being mixed or mingled with the Oyl which proceedeth from the Bay-tree, and then mollified both together, and so anointed upon any one which is troubled with the scurfe or mange, the scabs whereof doth cut or pierce the skin, doth presently and without any grief or pain cure the same. The twigs of a Vine-tree being dried and beaten into small

Respi.

dull or powder, and mingled together with the fat or greafe of a Leopard, and so anointed upon the face of any one who is grieved with akins and swelling thereon, will not only cure and heal the same without any pain or sorrow, but also preserve the same free from blemishes in the time of healing. The greafe also of a Leopard by it self, being anointed upon the head of any one who doth shed or cast his hair, or is troubled with the Foxes evill, doth immediately help and cure the same. The blood of a Panther being anointed upon the veins or sinews of either man

Arum.

Galen.

or woman who is grieved with any swelling or akins therein, is very profitable and curable to expel the same away. The brains of a Leopard being mingled with a little quantity of the water which is called a Canker, and with a little Jasmine, and so mixed together and then drunk, doth mitigate the pain or ach of the belly. The brains of the same beast being mixed with the juice of a Canker, and anointed upon the genital of any man, doth incitate and stir him up to lechery, but the marrow which cometh from this beast, being drunk in Wine doth ease the pain or wringing of the guts and the belly. The gall of a Panther being received into the body either in meat or drink, doth instantly and out of hand kill or poyson him which doth so receive it. The right stone of a Leopard being taken of a woman of a full spent age, doth restore unto her, her mensural purgation being ceased, and doth make her to purge, if she doth heartily receive her meat more often.

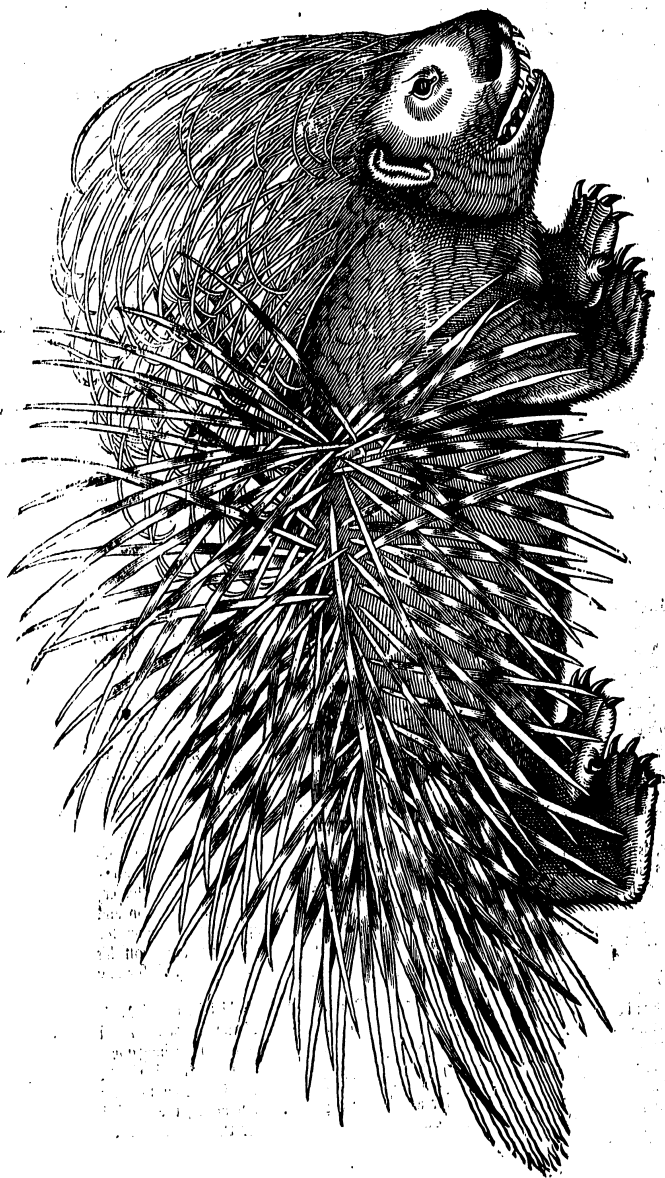
## Of the POEPHAGUS.

There is a beast in *India* called *Poephagus*, because he feedeth upon herbs and grasse like a Horse, whose quantity he doth exceed double, for he is twice so big, his tail is most thick and black, the hairs whereof are thinner then the hairs of a mans head: and therefore *Indian* women make great account of them, for with them they binde up their own hair, plaiting it, and folding it in curious manner, every hair is two cubits in length, and upon one root twenty or thirty of them grow together: this great beast is one of the fearfullest creatures in the world; for if he perceive himself to be but looked at of any body, he taketh him to his heels as fast as he can go, and yet although his heart be light, his heels be heavy, for saith my Author, *Magni studio quam celeriter fugam peragat*. That is, He hath a good will to run apace, but cannot perform it: but if he be followed upon good swift Horses, or with nimble Dogs, so as he perceiveth they are near to take him, and he by no means can avoid them, then doth he turn himself, hiding his tail, and looketh upon the face of the Hunter with some confidence, gathering his wits together, yet in fearful manner, as it were to face out his pursuer or hunter, that he had no tail, and that the residue of his body were not worth looking after: but while he standeth staring on his Hunter, another cometh behind him and killeth him with a Spear, so they take off the skin and tail, and throw away the flesh as unprofitable, for the other recompense their labour for their pains. *Volaterranus* relateth this a little otherwise, and saith that the beast biteth off his own tail, and so delivereth himself from the Hunter, knowing that he is not desired for any other cause.

*Nicolaus Vemetus* an Earl, writing of the furthest part or Province of *Asia*, which he calleth *Macedonia*, and I think he meaneth *Serica*, because he saith it lyeth betwixt the Mountains of *India* and *Cathay*, there are a generation of white and black Oxen which have Horses tails, but reaching down to their heels, and much rougher. The hairs whereof are as thin as the feathers of flying birds, these he saith are in great estimation; for the Knights and Horsemen of that Countrey do wear them upon the top of their lances and spears for a badge or cognizance of honour, the which I thought fit to be remembered in this place, because I take them to be either the same with these *Indian* beasts, or very like unto them.

Euseb. Silv.

The Porcupine or Porcupine.



I can.

I cannot learn any name for this Beast among the *Hindus*, and therefore by probability it was The several  
unknown to them: The *Grecians* call it *Arctomys* and *Erismus*, that is, *sea mouse*, hairy, or  
brilliant, or thorny. *Horn* for their quills which they bear upon their back are called both *Arctomys* and *Erismus*.  
The *Arabs* call it *Arctomys*, and *Erismus*, that is, both hairy, brilliant, rough hair, pins, prickles, and sharp. The  
*Arabs* call it *Arctomys*, and *Erismus*, that is, both hairy, brilliant, rough hair, pins, prickles, and sharp. The  
his *Geographers*, is defined to be *Arctomys*, *Erismus*, *Arctomys*, *Erismus*, *Arctomys*, *Erismus*, *Arctomys*, *Erismus*,  
Mountain, having quills upon its back, which are sharper than the quills of a hedgehog. *Belonius*,  
call it this day call it *Arctomys*, *Erismus*, *Arctomys*, *Erismus*, *Arctomys*, *Erismus*, *Arctomys*, *Erismus*,  
The *Arabs* call it *Arctomys*, and *Erismus*, that is, both hairy, brilliant, rough hair, pins, prickles, and sharp. The  
the *French* call it *Arctomys*, and *Erismus*, that is, both hairy, brilliant, rough hair, pins, prickles, and sharp. The  
call a *Sea-hog*, *Arctomys*, *Erismus*, *Arctomys*, *Erismus*, *Arctomys*, *Erismus*, *Arctomys*, *Erismus*,  
Dutchmen, that is, *Arctomys*, *Erismus*, *Arctomys*, *Erismus*, *Arctomys*, *Erismus*, *Arctomys*, *Erismus*,  
following the *Italian*, *Spaniards*, *French*, *English*, and *Liberians*: I will not stand so quiet  
them, who write that this Beast is a *Sea-beast*, and not a *Beast of the land*, nor yet those that make  
question whether it be a kinde of *Hedgehog* or not, for with all controversy, as the *Arabians*,  
*Pliny*, *Albertus*, *Belonius*, and other do affirm, the vulgar *Hedge-hog*, is *Erismus Sylvestris*, and the  
Porcupine *Erismus Montanus*.

These are bred in *India* and *Africa*, and brought up and down in *Europe* to be seen for money:  
Likewise about the City *Cassim* in *Tartaria*, by the sight of one of these it appeared, that it was three  
foot long, the mouth not unlike to a *Hare*, but with a longer slit or opening: so also the head of  
the same similitude, the ears like to the ears of a man; the fore-feet were like the feet of a *Badger*,  
and the hinder-feet like the feet of a *Bear*: it hath a mane standing up in the upper part right or  
direct but hollow or bending before: Upon the bunches of his lips on either side of his mouth, there  
groweth forth long black bristles. The general proportion of his body is like a *Swine*, and they  
never exceed the stature of a *Swine* of half a year old.

The four foremost teeth hang over his lips, and that which is most admirable in him,  
the Quills or Thorns growing upon his back in stead of hair, he useth for hands, arms, The quills and  
and weapons. spears.

They first grow out of the back and sides, which are of two colours, that is partly black, and  
partly white, which whensoever he pleaseth, he moveth to and fro like as a *Peacock* doth his tail:  
they grow in length two, three, or four hand breadths, they stand not in any confused order of  
colours, but in well formed distinguished ranks, being sharp at the points like a knife: When  
they are hunted the Beast stretcheth his skin, and casteth them off, one or two at a time, ac-  
cording to the necessity upon the mouths of Dogs, or legs of the Hunters that follow her, with  
such violence, that many times they stick into trees and Wood, wherefore *Solinus* writeth thus,  
and also *Paulus Venetus*: Cum capiuntur, spinis suis sepe homines, & canes ledunt: nam canes in eis pro-  
vocali, adeo irritant feras illas, ut simul concurrentes terga sua quibus spina inniuntur vehementer commoveant,  
atque in viciniores homines, & canes vibrent. That is to say, When they are taken they many times hurt  
both Dogs and men, for when the Dogs being provoked by them, run upon the backs which bear  
the quills, they are so far stirred, that they cast them off upon all that stand near them, and therefore  
they fight flying.

The Hunters to save their Dogs do devise engines and traps wherein to take them; besides the  
quills that grow upon their backs, they have also some upon their heads and necks, which they  
never cast off, but keep them on as a *Horse* doth his mane. The pilgrims that come yearly from  
Saint James of *Compostella* in *Spain*, do bring back generally one of these quills in their Caps, but for  
what cause I know not. The pace of this Beast is very slow and troublesome unto it, and therefore  
it is hardly drawn out of his den, which it diggeth like a *Badger*, from which it never goeth far,  
but feedeth upon those things which are near unto it: It is a filthy Beast, smelling rank because it  
liveth so much in the earth, being wilde it never drinketh, and I think it eateth Apples, Roots, and  
rindes of trees, and peradventures *Snail*, and such reptile creatures, but being tamed, it eateth all  
kinde of fruit, likewise bread, Pie-crust, and such things broken small. It drinketh also water, but  
above all other, White mingled with water: In the day time it sleepeth, and in the night time it  
waket, by which we gather, that being wilde it feareth the light, and therefore travellet in the  
night time for his meat and living. It is a general live creature, and begetteth other in his own kind:  
the female bearing the young ones in her belly, as long time as a *Bear*, that is, thirty days; and also  
it hideth itself four months in the Winter time, like a *Bear*, but whether for cold, or any other  
cause the Authors do not expresse.

In my opinion for cold rather then for any other reason, although there be some that affirm it  
lyeth hid in the Summer time, and cometh abroad in the Winter time, contrary to the course of  
all other Beasts, and therefore such a Paradox doth want the testimony of some credible Writers,  
which should affirm it upon their own experience, or else it were requisite to bring sufficient rea-  
sons to lead their Readers to believe it, but neither of both is discharged by them, and therefore  
it is safer for us to follow *Arctomys* and *Erismus*, who hold the first opinion, than *Arctomys* and *Erismus*  
who encline to the latter. In all other things, both of their living kind, of their procreation, of the  
coming out of their cave, and of their manner of living, they are the same, and therefore  
I will not stand so quiet.

The den and  
food.123232 232 30  
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Con-

Concerning the use of their parts, I finde none but only of their quills, for with them it is said, if men scrape their teeth they will never be loose, likewise women were wont in ancient time to use them for parting asunder their hair in the top of their crowns.

The use of the  
Belt, and other  
parts.

The flesh of this Beast is like a Hedge-hog, neither very natural for meat and nourishment, nor yet very medicinable: yet it is said to help a weak and over-burthened stomach, to procure looseness of the belly, and to diminish all Leprosies and scabbed Exulcerations and pustules. Being salted it is a good against the Dropsie, and also very profitable, as *Plinius* writeth, to be eaten by them that cannot contain urine in their beds: yet the *Grecians* attribute no such quality unto this, but to help the stomach and loosen the belly, they attribute to the Sea-hog; and against the leprosie, and incontinency of urine to the Hedge-hog; but peradventure the saying of *Pliny*, (*Quæ de Herimachia dicitur omnia sunt magis utilis in Histria*) leadeth them to attribute these things to the Porenspine. The powder of their quills burnt, drunk or eaten in meats or broth, doth promote and help conception: Thus saith *Aldus*, and herewithall I conclude this short discourse of the Hedge-hog.

### Of the Reymr, or Reinger.



Of the several  
names.

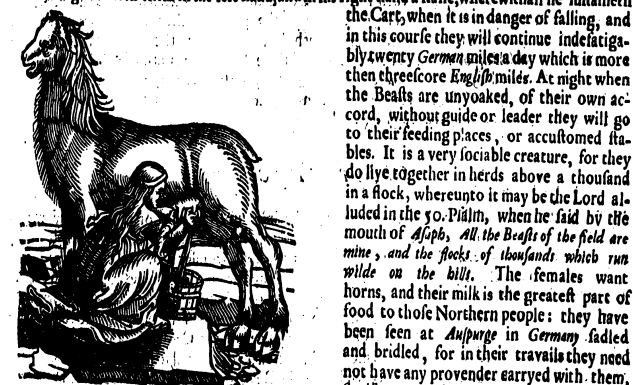
This Beast is called by the *Latines*, *Rangifer*; by the *German*, *Rein*, *Reiner*, *Ranger*, *Reinsiber*; by the *French*, *Rangier*, and *Rangler*, and the later *Latines* call it *Reingm*. It is a Beast altogether unknown to the ancient *Grecians* and *Latines*, except the *Metaphysic* that *Pliny* speaketh of be it. But we have shewed already in the story of the Elk, that *Alces* and *Miblis* are all one. This Beast was first of all discovered by *Olaus Magnus*, in the

Northern part of the world, towards the pole Artique, as in *Norway*, *Swedia*, *Scandinavia*, at the first sight whereof he called it *Rangifer*, quasi *Ramifer*, because he beareth horns on his head like the boughs of a tree. The similitude of this Beast is much like to a Hart, but it is much bigger, stronger, and swifter. It beareth three orders or rows of horns on the head, as by the direction of *Valentinus Crescens*, and *Benedictus Martinus* are here expressed.

This Beast changeth his colour according to the time of the year, and also according to the quality of the place wherein he feedeth, which appeareth by this, because some of them are found to be of the colour of Asles, and shortly after to be like Harts. Their breath is full of long bristles, being rough and rigid through the same. The legs hairy, and the hoofs hollow, cloven, and moveable, which in his course he spreadeth abroad upon the deepest snows, without pressing his footsteps into them; and by his admirable celerity he avoideth all the wilde Beasts which in the Valleys lie in wait to destroy him. He beareth very high and lofty horns, which presently from the root branch forth into two stems or pikes, I mean both the horns severally into two, which again at the top disperse themselves into pikes like the fingers of ones hand; In the middle of the horns there is a little branch standeth out like a knob, or as a buckle in the hinder-part of a Beasts leg, from thence again they ascend upwards a great height, and do grow abroad at the top, where they are divided like the palm of a hand.

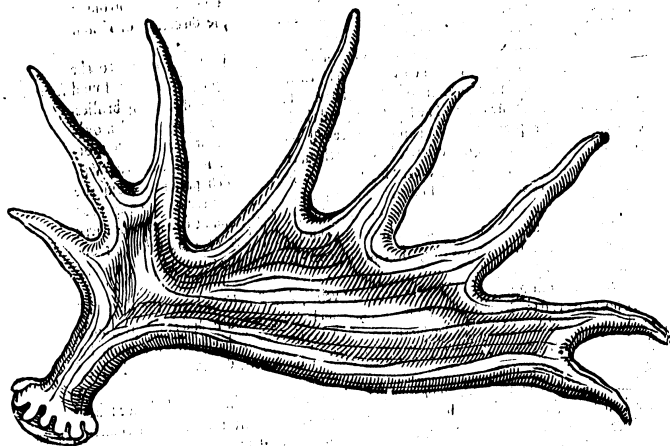
The horns are white, distinguished with long apparent veins, differing both from the horns of Elks, and the horns of Harts, from Elks in height, and from Harts in breadth, and from them both in colour and multitude of branches: When he runneth he layeth them on his back, for when he stands still, the lowest branches coming forth of the roots of the horns, do almost cover his face with these lower branches.

In the Winter time when he is athirst, and cometh to the frozen waters he breaketh the ice: being wilde he liveth upon such fruits as he findeth in the Woods, especially the gum that cometh out of the Trees, and also the moss that groweth upon them, making himself shadowed dens and retreating places in the Mountains: but in the deepest cold weather he cometh into the Mountains of *Norway*, towards *Mosby*, and other hills. He is taken by the Country people for private uses, for he is profitable alter he is tamed, both for the plough and travails in journeys. The people called *Lappi*, or *Lappones*; do use them in stead of Horses and Oxen, for they have a kinde of Cart made in form and fashion of a fishers boat whereunto they join these Beasts to draw them, and the Carcer hath a convenient seat fitted for him on the fore-part thereof, wherein he sitteth with his legs fast tied to the Cart, so the intent he be not cast off when the Beast runs speedily; he carryeth the reins whereby he governeth them in his left hand, and in his right hand a staffe, wherewithall he susteineth the Cart, when it is in danger of falling, and in this course they will continue indefinitely twenty *German* miles a day which is more then threecore *English* miles. At night when the Beasts are unyoked, of their own accord, without guide or leader they will go to their feeding places, or accustomed stables. It is a very sociable creature, for they do lye together in herds above a thousand in a flock, whereunto it may be the Lord aluded in the 50. Psalm, when he said by the mouth of *Asaph*, *All the Beasts of the field are mine, and the flocks of thousands which run wilde on the bill*. The females want horns, and their milk is the greatest part of food to those Northern people: they have been seen at *Auspurg* in *Germany* saddled and bridled, for in their travails they need not have any provender carryed with them, for if ye turn them out in the middle of the Winter, they finde certain roots and moss under the snow whereof they eat, and content themselves. Their best food is grafs. They are used both in *Musovia*, *Polonia*, *Bohemia*, *Scandinavia*, and *Mosovia*, yet they can endure no heat, for being brought into *Bohemia* they dy.



Their Carts which they draw must be made with a sharp edge at the bottom like a boat or ship as we have said already, for they are not drawn upon wheels, but like drays and sleds upon the earth. There was a *Lapponian* which brought one of these into *Germany* in *December*, & he professeth he never felt so much heat of the Sun in all his life, as he did at that time, which is our coldest time in the year, and therefore how great is the cold which both men and Beasts endure in that Country?

The horns of these Beasts are to be seen both in *Berne* and at *Auspurg* in *Germany*; the feet are sometimes white, being rounder then a Harts feet, and more cloven or divided, wherefore at some times one part of his hoof may be seen upon a stone, while the other part resteth upon the earth, and in the upper part of the hoof where it beginneth to be cloven near the leg, there is a certain thick skin or membrane, by vertue whereof the foot may be stretched in the division without harm or pain to the Beast.



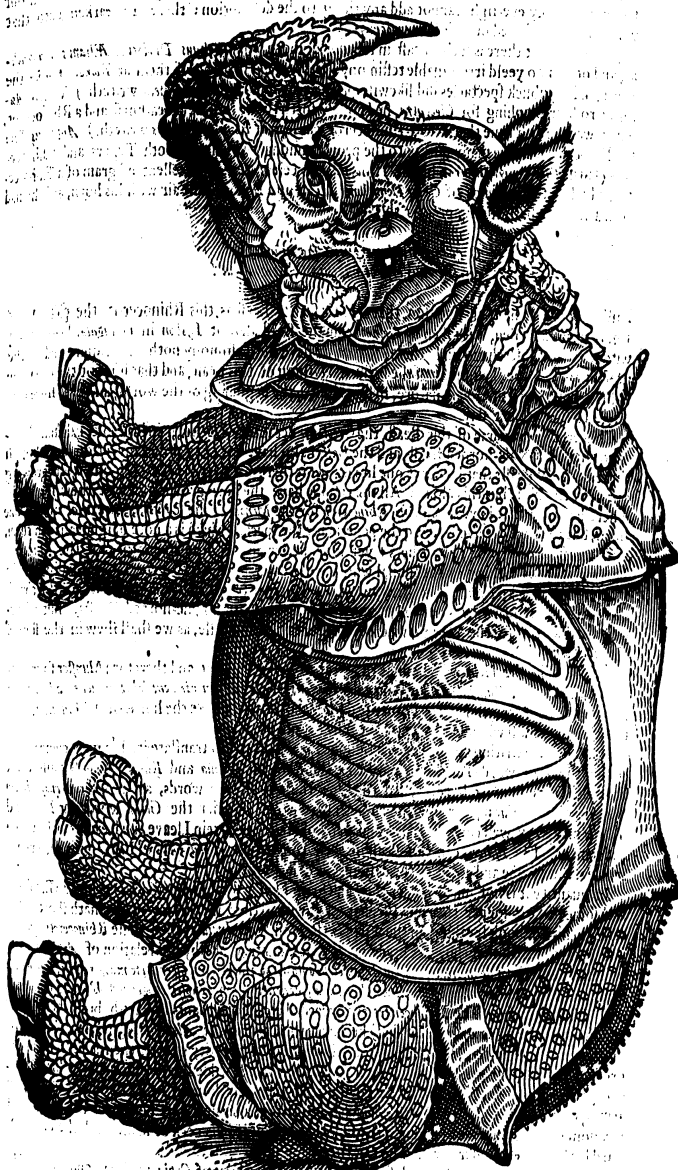
The King of *Swedia* had ten of them nourished at *Lappa*, which he caused every day to be driven unto the Mountains into the cold air, for they were not able to endure the heat: The mouth of this Beast is like the mouth of a Cow, they many times come out of *Lapponia* into *Swedia*, where they are wonderfully annoyed with Wolves, but they gather themselves together in a ring, and so fight against their enemies with their horns. They are also in their own natural Country annoyed with Gulsas, and generally all Beasts that live upon the spoil of flesh, are enemies unto them, and desire to destroy and eat them. In their pace, both slow and speedy, the articles of their legs make a noise like the cracking of Nuts. There was one of these Beasts given unto the Duke of *Savoy*, in the year of our Lord 1361. In *Scandinavia* they use them for the carriage of metals, drawing of Chariots and riding, and the nerves of them when they are dead make bows, and for want of nails, they do fasten planks and boards together.

#### Of the RHINOCEROS.

A preface to  
the succeeding  
story.

WE are now to discourse of the second wonder in nature, namely of a Beast every way admirable, both for the outward shape, quantity and greatness, and also for the inward courage, disposition and mildness. For as the Elephant was the first wonder, of whom we have already discoursed; so this Beast next unto the Elephant filleth up the number, being every way admirable as he, if he do not exceed him, except in quantity or height of stature. And being now come to the story of this Beast, I am heartily sorry, that so strange an outside, as by figure you may perceive, yielding no doubt through the Omnipotent power of the Creator, an admirable inside, and infinite testimonies of worthy and memorable virtues comprized in it, should through the ignorance of men, lie unfolded and obscured before the Readers eyes: But that shall not be our business, but to unfold the story of this Rhinoceros, as the outward shape and picture of him, appeareth rare and admirable to his eyes: differing in every part from all other Beasts, from the top of his nose to the tip of his tail, the ears and eyes excepted, which are like Bears. But gentle Reader, as thou art a man, so thou must consider since *Adam* went out of *Paradise*, there was never any that was able perfectly to describe the universal conditions of all sorts of Beasts; and it hath been the counsel of the Almighty himself, for the instruction of man, concerning his fall and natural weakness, to keep him from the knowledge of many divine things, and also humane, which is of Birds, and Beasts, Fishes and Fowl, that so he might learn the difference betwixt his generation, and his degeneration, and consider how great a loss unto him was his fall in *Paradise*; who before that time knew both God himself and all creatures; but since that time neither knoweth God as he should know him, nor himself as he shall know it, nor the creatures as he did know them.

But











there is any meat so grateful unto this cattle, but that life and continuance will make them to loath it, wherefore he must provide this remedy, namely to give them salt oftentimes in the Summer when they return from feeding, and if he do but lay it in certain troughs in the folds, of their own accord they will lick thereof, and it will increase in them great appetite.

In the Winter time when they are kept within doores, they must be fed with the softest hay, such as is cut down in the Autumn, for that which is ripe is less nourishable to them. In those Countries they lay up for themselves especially green Ewe leaves, or Elm, three-leaved-grass, flowered-vines, chaffe or pease, when other things fail: where there are store of Vines, they gather their leaves for Sheep to eat thereof without all danger, and very greedily, and I may say as much of the Olive, both wilde and planted, and divers such other plants, all which have more veruue in them to fat and raise your beast if they be asperfed with any salt humor: and for this cause the Sea-wormwood excelleth all other herbs or food to make fat Sheep. And *Myndus* writeth, that in *Pontus* the Sheep grow exceeding fat by the most bitter and vulgar Wormwood. Beans encrease their milk; and also Three-leaved-grass, for that is most nourishable to the Buis with young. And it is observed for the fish which in *Latine* is called *Luxuria* *segetum*, and in *English* ranknels of corn, there is no better remedy when to turn in your Sheep in May when the ground is hard, if not before, for the Sheep forth then to crop such stalks, and also the corn will thrive never the worse; for in some places they cut it down twice, and in the Countrey about *Babylon* thrice, by reason of the great fertility thereof, and if they should not do so, it would turn or run all into stalk and idle and unprofitable bount, and if they should not do so, it would turn or run all into stalk and idle and unprofitable leaves. The same extasie is reported to follow Sheep when they have eaten *Brigitia*, that we have expressed also in the History of Goats, namely, that they all stand still, and have no power to go out of their pastures, till their Keeper come and take it out of their mouths: It is reported that they are much delighted with the herb called *Laserpitium*, which first purgeth them, and then do sit them exceedingly. It is therefore reported that in *Cyrene*, there hath been none of this found for many years, because the Publicans that hire the pastures are enemies to Sheep. For at the first eating thereof the Sheep will sleep, and the Goat will fall a neezing. In *India*, and especially in the Region of the *Prasium*, it raineth many times a dew like liquid Honey falling upon the herbs and grass of the earth: wherefore the shepherds lead their flocks unto those places, whereunto their cattle are much delighted, and such as is the food they eat, such also is the taste of the milk they receive: neither need they to mingle Honey with their Milk, as the *Graecians* are constrained to do; for the sweetness of that liquor saveth them of that charge. Such a kinde of dew the *Elbians* call *Manna*; the *Gracians*, *deromelos*; and *Drosomelos*; the *Germani*, *Himmelburg*; and in *English* Honey-dew; but if this be eaten upon the herbs in the month of May, it is very hurtful unto them: We have shewed already, that in some parts of *Africa* and *Arabia*, their Sheep eat flesh and drink milk; it is apparent by *Philostratus*, that when *Apollonius* travelled towards *India*, in the Region *Pagada*, thence, bited by the *Orontes*, they fed their Sheep with fishes, and so also they do among the *Carmanian* Indians, which do inhabit the Sea-coasts: and this is as ordinary with them, as in *Caria*, to feed their Sheep with figs, because they want grain in that Countrey; and therefore the flesh of the Sheep doth taste of fish when it is eaten, even as the flesh of Sea-fowls. The people of that Countrey are called *Ichthyophagi*, that is fish-eaters: Likewise the Sheep of *Egypt* and *Macedonia*, their Sheep grow fat with eating of fishes. *Benius* also writeth of certain fishes about the bigness of Frogs which are given unto Sheep to be eaten. In *Arabia* in the Province of *Aden*, their Oxen, Camels, and Sheep, eat fishes after they be dried, for they care not for them when they be green: the like I might say of many other places, generally it must be the care of the shepherd to avoid all thorny and stony places for the feeding of his Sheep, according to the precept of *Virgil*:

*Si tibi laniolum cura, primum aspera sylvae  
Lappaq; tribulique abstin.*

Because the same thing, as he writeth, maketh them bald, and oftentimes scratcheth their skin under, his words are these;

*Turpis oves tentat scabies  
cum visis illius ad haest  
Sudor, & bursi secernunt corpora vepres.*

Although a Sheep be never so found, and not much subject to the Pestilence, yet must the shepherd regard to feed it in choice places: for the fat fields breed starr and tall Sheep, the hills and short pastures broad and square Sheep: the Woods and Mountain places, small and slender Sheep: but the best places of all are the plowed grounds. Although *Virgil* prescribeth his Sheep to feed his flock in the morning, according to the manner of the Countrey wherein he lived, for the middle part of the day was over hot, and not fit for cattel to eat in: yet other Nations, (especially *Germany* and *England* and these Northern parts of the world) may not do so. The whole cunning of shepherds is excellently described, for the ordering of their Sheep in these verses following:

By

*Ergo omni studio glaciem, ventosq; nivales,  
Quamvis est illis cura mortalis aestas  
Proteret: pinguisq; feres, & virga-lectus  
Pabula: nec sola claudet familia bruma.  
Atque Zephyrus cum laeta vocantibus est  
In salubrem gregemq; alq; in pascua mittes.  
Lactis primum cum lacte frigida rura  
Carpebas, dum ovine novum decurrit gramina cuncti:  
Eras in tenera pascua gratissima herba,  
Iude, ubi quidam stili cali collegit vota,  
Et centum querele rumpent arbuta cicada.*

*Ad pascua, aut alia greges ad stagna jubeo  
Currentem illisq; pascua canalibus undam.  
Eribus ad media umbrosam acquiere vallem,  
Sicubi magna Jovis antiqua robore quercus,  
Ingentes tendit ramos: aut sicubi nigrum  
Nivolum erubescit lacta nemus aculeis umbra.  
Tunc tenues dare riuus aquas: & pascere riuus  
Sola ad occasum, cum frigidus aequa vesper  
Temperat: & salus reficit jam frigida luna;  
Litterarq; balneum relaxant, & acumbula dum.*

The description of a shepherd's care out of *Virgil*.

\* Over & against.

When they return from their feeding, the shepherd must regard that he put them not into the folds hot, and if the time of the year be over hot, let them not be driven to pastures a far off, but feed them in those which are near and adjacent to their folds: that so they may easily have recourse unto the shadow: they ought not also to be turned out clustering all together, but dispersed abroad by little and little, neither must they be milked while they are hot, until they be cold a little, so likewise in the morning, let them be milked so soon as day appeareth, and the little lambs be turned out into them which were shut from them. But if there appear upon the grass Spiders webs, or Cob-webs which bear up little drops of water, then they must not be suffered to feed in those places for fear of poisoning; and in times of heat and rain, drive them to the highest hills, or pastures, which do most of all lie open to the winds, for there shall the cattle feed most temperately. They must avoid all stony places, and in the month of April, May, June, and July, they must not be suffered to feed overmuch, but in October, September, and November, let them have their full, that so they may grow the stronger against the Winter time. The Romans had a special regard to chuse some places for the Summering of their Sheep, and some place for their Wintering, for if they Summered them in *Apulia*, they wintered them in *Pannonia*; and therefore *Varro* saith the flocks of *Apulia* bestimes in the morning in the Summer season, are led forth to feeding, because the dewy grass of the morning is much better then that which is dry in the middle of the day, and about noon when the season groweth hot. They lead them to shadowy trees and rocks, until the cool air of the evening begin to return, at which time they drive them to their pasture again, and cause them to feed towards the Sun-rising: for this is a general rule among the shepherds; *Quod mane ad solis occasum, & vespere ad solis ortum, videri oportet.* That is, that in the morning they feed their Sheep towards the Sun-rising, and in the evening towards the Sun-setting, and the reason of it is; *Quia infirmisimum praeiudicium, deinde perniciosa est.* Because the head of Sheep is most weak, therefore it ought to be kept from the Sun. In the hot Countries a little before the Sun-setting they water their Sheep, and then lead them to their pasture again, for at that time the sweetness of greenness to be renewed in the grass, and the they do after the Autumnal equinoxium. It is good to feed them in corn fields after harvest and that for two causes: First, because they are exceedingly filled with such hearbs as they find after the plough, and also they tread down the stubble, and dung the land, whereby it becomes more fruitful against the next year. There is nothing that maketh a Sheep grow more fat then drink; and therefore we read in holy Scripture how *Jacob* watered the Sheep, and the Daughters of *Leah* watered their Sheep, at what time *Moses* came unto them, therefore it is best oftentimes to mingle their water with Salt, according to these verses;

*At qui lassus amens, cythrum lotosq; frequent,  
Iste manu solusq; ferax praeparat herbas  
Atque & magis, flavio magis, & magis ubera tendunt,  
Et vultum refectum in lacte saporem.*

There be many that trouble themselves about this question; namely, for what cause the Sheep of *England* do never thirst, except they see the water; and then also seldom drink, and yet have no more Sheep in *England* than in any other Countrey of the world; inasmuch that we think a prodigious thing that Sheep should drink: but the true cause why our *English* Sheep drink not, is, for there is so much dew on the grass that they need no other waters, and therefore *Aristotle* was deceived, who thought that the Northern Sheep had more need of water than the Southern. In *Spain* those Sheep bear the best fleece of wool that drink least. In the Island of *Cephallonia* as we have shewed in the History of the Goat, all their Cattle for want of water do draw in the cold air; but in the Northern Countries every day once at the least about nine or ten a clock in the morning they water their Sheep, and to great use the operation of drink in Sheep, that divers Authors do report wonders thereof. *Plinius*, *Macrobius*, and *Theophrastus*, who affirm that in *Macedonia*, when they will have their Sheep bring forth white Lambs, they lead them to the River *Albanus*; and when they will have them to bring forth black Lambs, to the River *Asius*, as we have shewed already. It is also reported that the River *Syrander* doth make all the Sheep so be yellow that drink thereof: Likewise there are two Rivers in *Arabia* which turn Sheep from black to white, and white to black,

The reason why the Sheep of *England* do not drink.

S f





cross in the matrix, or else if that be impossible, because it is dead in the dams belly, yet to cut it out without peril and danger to the Ewe, in such cases the *Gracians* call a shepherd *Em-bruonico*.

Cullody of  
Ewes and  
young Lambs  
and means to  
encrease their  
milk.

Having thus brought the Sheep to their delivery for the multiplication of kinde, it then relish to provide that the new born Lamb may be secured from Dogs, Wolves, Foxes, Crows, Ravens, and all enemies to this innocent Beast, and also to provide that the Ewe may render to her young one sufficient food out of her udder; therefore they must be well and extraordinarily fed. We have shewed already the use of Salt, and then also it is very profitable when the Ewe is newly delivered of her Lamb, for it will make her drink and eat more liberally. In the Winter time for the encrease of their milk, in stead of green pastures, and such other things as we have expressed, it is requisite to give them corn, and especially plenty of Beans.

For this cause some prescribe to be given unto their Sheep the herb *Lanaria*, which they affirm to be profitable to be given to encrease milk; some the stone *Galucites* to be beaten to powder, and anointed upon the Ewes udder; and some prescribe to sprinkle water and salt upon them every morning in the house or field, before the Sun rising.

But herein I leave every man to his own judgement, hoping it will not be offensive to any, to relate those things before expressed, and resting in opinion, that both the food that is received inwardly, and also the Ointments that are applied outwardly, will be sufficient means to procure abundance of milk in the Summer and Winter seasons.

Of the winter-  
ing and sta-  
bling of sheep.

Now therefore it followeth to entreat likewise of the Wintering of Sheep, for as there is more colt to keep them in cold weather then in warm, so it doth require at our hands some discourse thereof. Then it behoveth you to provide for them warm folds and stables, whereof the Poet writeth in this manner:

*Incipiens, stabulis edico in mollibus berbam  
Corpere ovem, dum mos frondosa reduitur aestis:  
Et multa duram stipula siliisque manipla  
Sternere subter humum; glacies ne frigula ledat  
Molle pecus scabimus; Jetat, turpelis; podagras.*

Whereby it is evident that the cold Winters do beget in Sheep divers and many diseases, and for that cause it was the counsel of a wise and learned man, that our Sheep should not be turned out to feeding neither in cold or warm weather, until the frost were dissolved and thawed, from off the grass and earth.

*Paladius.  
Pet. Crescent.*

The *Tarentine*, *Gracian*, and *African* Sheep, were wont to be altogether kept in stables within doors, lying continually upon planks and boards bored through, that so their precious fleeces might be the better safe-guarded from their own filth and urine: and three times in the year they let them out of their stables, to wash them and anoint them with Oyl and Wine: and to save them free from Serpents, they burned in their stables, and under their cratches, *Galbanum*, Cedar-wood, *Womans* hair, and *Harts-horns*: and of these *Tarentine* and *Gracian* Sheep, *Columella* writeth in this manner: It is in vain for any man to store himself with those *Tarentine* Sheep, for they ask as much or more attendance and costly food then their bodies are worth; for as all Beasts that bear wool are tender, and not able to endure any hardness; so among all Sheep, there are none so tender as the *Tarentine* or *Gracian* Sheep, and therefore the Keeper of them must not look to have any playing days, nor times of negligence or sluggishness, and much less to regard his covetous minde, for they are cattel altogether impatient of cold, being seldom led abroad, and therefore the more at home to be fed by hand; and if by covetousness or negligence, one withdraw from them their ordinary food, he shall be penny wise, and pound foolish: that is, suffer a great loss in his cattel, for saving from them a little meat.

Every one of them all the Winter long, were fed with three pintes of Barley or Pease, or Beans three times a day, beside dried Ewe-leaves, or Vine leaves, or Hay late mown, or fitches, or chaff. Besides there cannot be any milk taken from the dams, for at the first yearning there is no more then to serve the little or least Lambs, and after a few days, even while they smell and taste of their dams belly, they were to be killed for want of suck, that every Lamb which was to be preferred for breed might have two dams or Ewes to suck, and so the poor Ewe was forced to a double miserie; first to loose her young one, and afterward to lend her paps and milk to a stranger. And moreover, they were forced to nourish more males then females, for that at two year old they were gelded or killed, to sell their beautiful skins to the Merchant, for their wool was most precious, by reason that never or seldom they went abroad to the fields. Their custody in the house from Serpents and other annoyances, is thus described by the Poets:

*Disce & odoratam stabulis incendere cedrum  
Galbanos; agitare graves nidore cbelydros.  
Sape sub immotis praesepibus, aut mala tattu  
Viperam delituit, calum; exterrita fugit,  
Aut recto affectus cubile.*

In consideration whereof, and of all the pains about the housing of these tender Sheep, the Poet teacheth the shepherd or Sheep-maler to kill the Serpents, and dash out the brains of snakes, saying:

*Capo saxa manu; capo robora pastor  
Tollentem; minas, & sibilis colla tumentem  
Dejice.*

Concerning the ancient forms of their Sheep-stables, I finde this to be recorded by the ancients. The fashion of  
First, they made them low and not of any high or lofty building, so stretching them out in length, and not in height, that it may be warm in the Winter time; for although there be no creature better clothed by nature than a Sheep, yet is there not any more impatient of cold, nor more apt to take harm thereby. It must not be over-broad; yet so as the Ewe and her Lamb may lie both together, and the breathing place not left open at the top of the house or the sides, for that will let in too much air, but at the door or porch of their entrance, and that very low, that so the fresh air may quickly and easily come to their low heads and bodies, and also their breath the better avoid out of the stable.

They also had a care to cover all the floor with straw or dry boarded boards, or some such other matter, whereby they might stand continually dry and warm, and also clean and sweet, to the end they might not be annoyed in their own standings; and therefore the floor was made shelving or falling low on the one side, or else of hurdles like baskets to let out their urine, for they often make water: and these were often changed, cleaned, and turned. In this stable there ought to be divisions or partitions wherein in time of necessity and sickness, they may easily abide alone and be parted from the residue, and feed without annoyance of one another, and especially that one may not ride another, and during the time of the Winter, they did not let their cattel drink above once a day.

And these were the cures of the Ancients about their flocks of Sheep. For upon them they lived, they bought and sold, and herein also it is profitable to observe the ancient manner of their bargains about these creatures: for when a man came and bought Sheep, he made this protestation to the seller: *Tanti sum mihi emptus?* To whom the seller answereth, *sum*. Then the buyer draweth his money with these words; *Sic illecever, qua dote agitur, sum recte esse uti pecus ovillum, quod recte sum est, extra lucram minam i. ventre glabro, neq; de pecore morbose esse, bubereq; recte licere: hanc si referri respondes?* &c.

The manner  
how in old  
time they  
bought and  
sold sheep.

First, the Buyer saith, shall I buy these Sheep for thus much money? and so draweth his money, to whom the Merchant or seller answereth, you shall: Then saith the chapman or buyer again to him, Do you promise to me, then that these Sheep are as found as Sheep should be, without fault of maim or limb, without blindness, without deafness, without pield bellies, nor coming out of any infected flock; and so as it shall be lawful for me to enjoy them without all mens contradiction, if these things be true, then I will strike up the bargain: and yet doth not the seller change the property of his sheep, nor lose his Lordship over them until the money be paid: And hereupon it cometh to pass that the buyer may condemn the seller, if the cattel be not so good as his bargain, or if he do not deliver them; even as the buyer is subject to the same judgement, if he do not deliver the price. And concerning shepherds, and custody of flocks I may adde a word or two more: First of all for the number of the Sheep, how many may safely be kept in every flock.

There is no need that I should give any rules about this business, for the Ancients were wont to set one shepherd over a hundred rough or coarse woolled Sheep, and two shepherds over a hundred fine woolled Sheep: the common flocks were seventy, or fourscore, and the shepherd that followed them, was charged to be both vigilant and gentle, and therefore his discipline was: *Duci propius esse quam domino, & in cogendu, recipiendisque ovibus, adclamatione, ac baculo minetur, nec unquam istum emittit, neque ab his longius recedat, nec aut recubit, aut concidat, nam hiis procedit, stare debet, quoniam grex emitit custodia officium sublimem celsissimumq; oculorum, veluti specularem, desiderat, ut neq; tardius, & gravatus dum cunctantur, neq; agiles & festi dum procurant, separari a caeteris sinat, ne fur aut bestia belluantem pastorem decipiat, saith Columella.* He must rather be a guide unto them then a Lord or Master over them, and in driving them forward, or receiving them home after they have straggled, he must rather use his chiding voice, and shake his staffe at them, then cast either stone or dart at them: neither must he go far from them at any time, nor sit down, but stand still; except when he driveth them, because the flock desireth the direction of their Keeper, and his eye like a lofty watch-tower, that so he suffer not to be separated asunder, either the heavy Ewes great with young, because of their slow pace, nor yet the light and nimble ones which give suck, and are delivered of their young, which are apt to run away, lest that some ravening beast or thief deceive the lowering shepherd by taking away from him the hindmost or foremost. There may also be more in a flock of Sheep then in a flock of Goats, because the Goats are wanton, and so disperse themselves abroad, but the Sheep are meek and gentle, and for the most part keep round together: Yet it is better to make many flocks then one great one, for fear of the pestilence.

In the story of the Dogs we have shewed already, how necessary a shepherds Dog is to the flock, to defend them both from Wolves and Foxes, and therefore every shepherd must observe those rules there expressed, for the provision, choice, and institution of his Dog: and to conclude this discourse of the shepherd, when the Lambs are young he must not drive their dams far

to pasture, but feed them near the Town, Village or House, and his second care must be to pick and cull out the aged and sick Sheep every year, and that in Autumn or Winter time, lest they die and infect their fellows, or lest that the whole flock do go to decay for want of renewing and substitution of others, and therefore he must still regard that when one is dead, he supply the place with one or two at the least, and if he chance to kill one at any time for the household, the counsel of *Antipater* is profitable to be followed; *Illas tantum mactare debet oves ex quibus nullas amplius fructus, vel casei vel vellere, vel lactis, vel agnorum perveniet.* That is, to kill those Sheep from whom you can never expect any more profit by their Lambs, Milk, Cheese, or Fleeces.

### Of the diseases of Sheep, and their causes in general.

Of the diseases  
of Sheep.

In the next place it is necessary for the wise and discreet shepherd to avoid all the means whereby the health of his flock should be endangered, and those are either by reason of their meat and food that they eat, or else by reason of natural sicknesses arising through the corruption of blood, and the third way is by the biting of venomous beasts, as Serpents and Wolves, and such like; and a fourth way, scabs, Gowts, swellings, and such like outward diseases.

### Of venomous meats or herbs unto Sheep.

There is an herb which the Latines call *Herba Sanguinaria*, *Pilosella*, *Numularia*, and by the Germans and English call *Fengreek*, and by the French because of the hurt it doth unto Sheep, they use this circumscription of it: *L'herbe qui tue les brebis.* The herb that destroyeth Sheep. (It is called also *Serpentine*, because when Snakes and Adders are hurt therewith, they recover their wounds by eating thereof, when a Sheep hath eaten of this herb, the belly thereof swelleth abundantly, and is also drawn together, and the Sheep calteth out of his mouth a certain filthy spume or froath, which smelleth unsavourily, neither is the poor beast able to escape death, except presently he be let blood in the vein under his tail next to the rump, and also in the upper lip: yet is this herb wholesome to all other cattle except Sheep alone, wherefore the Shepherds must diligently avoid it. It is a little low hearb, creeping upon the ground with two round leaves, not much unlike to Parsley, it hath no favour with it, or smelleth not at all, the flower of it is pale and smelleth strong, and the stalk not much unlike the flower. It groweth in moist places, and near Hedges and Woods.

If in the Spring time Sheep do eat of the dew called the Hony-dew, it is poison unto them, and they die thereof: Likewise canes in the Autumn do make their belly swell unto death, if they drink presently after they have eaten thereof, for that meat breaketh their guts asunder: The like may be said of *Savine*, *Tamarisk*, *Rhododendron*, or *Rose-tree*, and all kinds of *Henbane*.

The female *Pimpernel* doth likewise destroy Sheep, except as soon as they have eaten of it, they meet with the herb called *Ferus-ocular*, *Wide-eye*; but herein lyeth a wonder, that whereas there are two kinds of this herb, a male and a female, they should earnestly desire a male, and eagerly avoid a female, seeing that both of them have the same taste in the palate of a man, for they taste like the raw roots of Beets.

There is an herb in *Normandy* called *Duna*, not much unlike *Robarb*, or great *Gentian*, but narrower leaves, and standing upright, the nerve whereof in the middle is red, and it groweth about the waters, and therefore I conjecture it may be *Water-sorrel*, or *Water-planton*, whereof when Sheep have eaten, they fall into a disease called also *Duna*, for there is bred in their liver certain little black Worms or Leeches, growing in small bags or skins, being in length half a finger, and so much in breadth, wherewithall when the Beast is infected, it is incurable; and therefore there is no remedy but to take from it the life: and that this is true, the Butchers themselves affirm, how many times they do finde such little worms in the Sheeps liver, and they say, they come by drinking of *Fenny* or *Marshy-water*. And to conclude, there is a kinde of *Pannick all*, whereof when Sheep have eaten it destroyeth them; and there be other herbs which every common shepherd knoweth are hurtful unto Sheep; and the Beast it self, though in nature it be very simple, yet is wise enough to chuse his own food, except the vehement necessity of famine and hunger causeth him to eat poisoned herbs.

In cases when their bellies swell, or when they have worms in their belly which they have devoured with the Herbs they eat, then they pour into their bellies the urine of men, and because their bellies presently swell and are puffed out with winde, the shepherds cut off the tops of their ears, and make them bleed, and likewise beat their sides with their staff, and so most commonly they are recovered. If Sheep chance to drink in their heat, so as their greafe be cooled in their belly, which Butchers do finde many times to be true, then the shepherd must cut off half the Sheeps ear, and if it bleed the Beast shall be well, but if it bleed not, he must be killed and eaten, or else he will starve of his own accord. If at any time a Sheep chance to devour a leech, by pouring in Oyl into his throat, he shall be safe from danger.

### Of the Colds of Sheep.

Sheep are known to be subject to cold, not only by coughing after they have taken it, but also by their strength before they take it, for the shepherds do diligently observe, that when any froit or ice falleth upon a Sheep, if he endure it, and not shake it off, it is a great hazard: but the same Sheep will die of cold, but if he shake it off, and not endure it, it is a sign of a strong, sound, and healthy constitution. Likewise for to know the health of their Sheep, they open their eyes, and if they do appear red and small, they know they are found; but if they appear white, or else red and full, they know they are weak, and will hardly live out Winter or cold Weather: also when they are taken in their hands, they press their back bone near the hips, and if it bend not they are sound and strong, but if they feel it bend under their hand, they hold them weak and feeble: Likewise if a man take them by the head or by the skin of the neck, if he follow him easily when he draweth him, it is a sign of weakness and imbecility, but if it doth strive, and follow with great difficulty, then it is a token of health and soundness.

### Of Scabs; and the causes of them.

The true original of Scabs is either as we have said already, leanness; or else cold, or wet, or wounds in the flesh by clipping, or to conclude, by the heat of the Beast in Summer not washed off, by thorns and prickings of bushes, or by sitting upon the dung of Mules, Horses, or Asses. Now when this first of all begetteth, it is cause for the shepherd to observe by these signes and tokens, for the tickling or itching humor, lying betwixt the skin and the flesh, causeth the poor Sheep either to bite the place with his teeth, or to scratch it with his horn, or to rub it upon a tree or wall, or if he can do none of these, stamp hard upon the ground with his fore-feet, for which it is good presently to separate the Sheep so affected from the flock. The description and cure whereof is thus expressed by *Virgil*:

The original  
cause of scabs.

*Tupis murensis scabies, ubi frigidus imber  
Alnus ad vitum pressedit, & horrida ram  
Dum agilis, vel cum torquis illatus adhebit  
Sudor, & hirsuta secernens corpora vipersi  
Dubitans, idcirco fluvius pectus omne magistri  
Insudant, ad idque artem invigilare villis  
Mestur, missusq; secundo desinit anni  
Aut torquis tristi contingunt corpus amara;*

*Et spuma mifcent argenti, utaq; sulphura  
Idcirco pectus, & pinguis hirsuta cerat  
Sollamq; belleboris, gravis nigra, bitumen  
Non tantum nulla magis praesentis fortuna laborum est  
Quam si quis ferri potius viscidet e iunonum  
Ulcis uti vultur vitium, vitulaq; legendo  
Dum medicos adhibere manus ad vulnera pastor  
Abnegat.*

which may be Englished in this manner: When the poor Sheep through wet showers, cold Winter, Summers sweat, or pricking of thorns, doth incur the filthy disease of scabs, then it concerneth his master to wash him in Sweet Rivers over head and ears, yea to cast him in to swim for his own life, or else to anoint his body after it is clipped with the spume or froth of Oyl, and of Silver with *Brimstone*, and soft *Ideen Pitch*, with *Wax*, *Hellebore*, *Black-earth*, or the flesh of *Shrimps*; or if it be possible to cut off the top of the wound with a knife.

### Of the Scabs of Sheep, the first remedy.

This disease the French men call *Letac*, and of all other it is one of the most contagious, for our English proverb justifieth, one scabbed Sheep infecteth a whole flock, and *Textor* writeth thus of it: *Ovis frequentius quam ulium aliud animal infestatur scabie, quam fecit macies, ut mater inopia cibi, bane morbo nisi occurratur unctio totum pecus inquinabit, nam ovis contagione vexatur.* That is to say, Sheep are more oftentimes infected with scabs than any other creature, wherinto they fall through leanness, as they fall into leanness through want of food; and therefore if a remedy be not provided for this evil, one of them infected will defile all the residue, for Sheep are subject to contagion: for remedy whereof in France they use this medicine: First of all they shear the Sheep, and then they mingle together the pure froath of Oyl and water, wherein Hops have been sod, and the lees of the best Wine, and so let it soak in two or three days together; afterwards they wash them in Sea water, and for want of Sea water in salt water: and this medicine is approved, whereby both scabs and ticks are removed from the Sheep, and also the wooll groweth afterwards better then ever it did before; but it is better if a man can cure them without shearing then by shearing, as *Parmenites*; and furthermore to wash Sheep oftentimes with this medicine, doth preserve them from scabs before they be infected: and others add unto this medicine little sticks of *Cypresswood* soaked in water, and so wash them therewith; some again make another medicine of *Sulphure* or *Brimstone*, *Cypres*, white *Lead* and *Butter*, mingled all together, and so anoint their Sheep therewith. Some again take earth which is as soft as dirt, being so softened with the stale of an Ale, but evermore they shave the scabbed place first of all, and wash it with cold or stale urine; and generally in Arabia they were never wont to use other medicine than the gum of *Cedar*, wherewithall they purged away by Ointment all scabs from Sheep, Camels, and Elephants:



## Of the Fluxes of Sheep, and looseness of the belly.

For this disease the Shepherds take no other thing but the herb *Tormentilla*, or *Set-foyl*, where. withall they stop all manner of laxes, but if they cannot get the same herb, then they take salt and give it unto them; and so having increased their thirst, they give unto them black Wine, whereby they are cured.

## Of the milt of Sheep.

IN April and May, through the abundance of thick grosse blood, the Milt of Sheep is stopped and filled, then the Shepherds will take two of their fingers, and thrust them within the Nostrils of the Sheep, there rubbing them untill they make them bleed, and so draw from them as much blood as they can.

## Of the sickness of the Spleen.

Forasmuch as a Horse, a Man and a Sheep, are troubled with the same diseases, they are also to be cured with the same remedies, and therefore Spleen-wort given unto Sheep, as to a Man and a Horse (as we have already expressed) is the best remedy for this Malady.

## Of the Fevers of Sheep.

Sometimes a shaking rage through an incensed and unnatural heat of the blood in the Sheep begeth in him a Fever, the best remedy whereof is to let him blood, according to these Verses;

*Quinetiam animi dolor habebant lapsus ad ossa,  
Cum surit, atq; artus depalear arida febris:  
Profuit incensus aëstus avertere: & inter  
Ima ferire pedis salientem sanguine vnam,  
Quam procul aut molli succedere sapis umbra*

*Videris, aut summas carpentem ignavus herbas,  
Extremamq; sequi, aut medio procumbere campo  
Pascentem, & sera solam decedere milti.  
Continuo ferro culpam compeste: pulvisque  
Dira per incanulum serpat contagio vulgus.*

In these Verses the Poet defineth the signes of this disease and the cure. The signes he saith are solitariness, and a careless feeding, or biting off the top of his meat, following always the hindmost of the flock, and lying down in the middle of the field, when others be a feeding, also lying alone in the night time, and therefore he wisheth to let them blood under the pastern or ankle bone of their foot, but by often experiment it hath been proved, that to let them blood under the eyes or upon the eares, is as available as in the legs; but concerning the Fever we will say more in the discourse of the Lambs.

## Of the Pestilence or Rotteneess of Sheep.

His sickness first of all cometh unto Sheep out of the earth, either by some earthquake, or else by some other Pestilent humor corrupting the vitall spirit: for Seneca writeth, that after the City *Pompeii* in *Campania* was overthrown by an Earthquake in the Winter time, there followed a Pestilence which destroyed six hundred Sheep about that City in short time after, and this he saith did not happen through any natural fear in them, but rather through the corruption of water and air which lyeth in the upper face of the earth, and which by the trembling of the earth is forced out, poisoning first of all the Beasts because their heads are downward and feed upon the earth; and this also will poison men if it were not suppressed and overcome by a multitude of good air which is above the earth. It were endlesse to describe all the evils that come by this disease, how some consume away by crying and mourning, filling both fields and hills with their lamentations, leaving nothing behind them, no not their skins or bowels for the use of Man: For the cure whereof, First change the place of their feeding, so that if they were infected in woods or in a cold place, drive them to the hills or to sunny warm fields; and so on the contrary, if in warm places and element air, then drive them to more turbulent and cold pastures: remove and change them often, but yet force them gently, weighing their sick and feeble estate, neither suffering them to die through laziness and idleness, nor yet to be oppressed through overmuch labour. When you have brought them to the place where you would have them, there divide them asunder, not permitting above two or three together, for the disease is not so powerful in a few as in a multitude: and be well assured that this removing of the air and feeding is the best Physick. Some do prescribe three-leaved grass, the hardest roots of Reeds, and of the Mountain, and such other Herbs for the remedy of this; but herein I can promise nothing certain, only the Shepherd ought oftentimes to give this unto his Sheep when they are found. I will conclude therefore this discourse of the Pestilence with the description of *Virgil*;

Bla.

*Baleus pecorum, & crebris singultibus amnes,  
Arenisq; sonant ripa celsosq; septat,  
Jamq; celeratim dat Bragem: atq; aggerat ipsi  
In pelvis, turpi dilapsa cadavera tabo,  
Tumida bano ieger, ac fossis abscondere disunt,  
Nam neq; erat corvis usus, nec viscera quicquam  
Aut undis addere potest, aut vincere flamma.*

*Neo tendere quidem morbo, illuvies; peresa  
Vellera, nec telas possunt attingere putres.  
Verum etiam impios si quis teneat amicum,  
Ardentes papule, atq; immundum olentia fuder  
Membra sequeretur: nec longo deinde moranti  
Tempore, comatos artus sacer ignis edebat.*

It is reported by *John Stowe*, that in the third year of *Edward the first*, and in *Anno 1275*, there was a rich man of *France*, that brought a Sheep out of *Spain* (that was as great as a Calf of two year old) unto *Northumberland*, and that the same Sheep fell rotten, or to be infected with the Pestilence, which afterward infected almost all the Sheep of *England*: and before that time the Pestilence or rotteneess was not known in *England*, but then it took such hold, and wrought such effects, as it never was clear since, and that first Pestilence gave good occasion to be remembered, for it continued for twenty and six years together. And thus much for this disease of the Pestilence caused in *England* for the most part in moist and wet years.

## Of Lice and Tikes.

Whether Lice or Tikes do molest Sheep, take the root of a Maple tree, beat the same into powder, and seeche it in water, afterwards clip off the wool from the back of the Sheep, and powre the said water upon the back, untill it hath compassed the whole body: some use for this purpose the root of *Mandrageras*, and some the roots of *Cypresse*, and I finde by good Authors, that all of them are equivalent to rid the Sheep from these annoyances: To conclude therefore the discourse of Sheeps diseases, it is good to plant near the Sheep-coats, and pastures of Sheep, the herb *Alyssum*, or wilde Gallow-grasse, for it is very wholesome for Goats, and Sheep; likewise the flowers of wormwood dried and beaten to powder given unto Sheep with Salt, doth awaige all inward diseases and pains, and also purge them throughly.

The juice of Centory is very profitable for the inward diseases of Sheep, and likewise the flowers of Ivy, the Hoom tree hath four kinds of fruit, two proper, the Nut, and the Grain; two improper, the Line, and Hiphear, this Hiphear is very profitable for Sheep; and it is nothing else but a confection made out of the barks of the Hoom tree: the word it self is an *Arcadian* word, signifying no other thing then visum and felix. Sheep also delight in the branches of Maiden-hair, and generally the Wool of Sheep burned to powder and given them to drink, is very profitable for all their inward diseases. And thus much shall suffice to have spoken of the several infirmities and sicknesses of Sheep, which I desire the English Reader to take in good part, wondering very much at the manifold wits, and stirring pens of these dayes, wherein I think our times may be compared to the most flourishing times that ever were since the worlds beginning; yet none have advenured to apply their times and wits for the explication of the several sicknesses of Sheep and Cattle.

I know there are many Noblemen, Knights and Gentlemen of the Land, and those also which are very learned, that are great masters of Sheep and Cattle, and I may say of them as the Prophet *David* saith: *Their Oxen are strong to labour, and their Sheep bringeth forth thousands and ten thousands in their folds*: Whereby they are greatly enriched, and yet not one of them have had so much commiseration, either towards the poor Cattle, in whose garments they are warmed, or Charity to the World.

For the better direction to maintain the health of these creatures, as to publish any thing in writing for the benefit of *Adams* children, but such knowledge must rest in the breasts of silly Shepherds; and for the masters, either they know nothing, or else in strange visitation and mortality of their Cattle, they ascribe that to Witchcraft and the Devil, which is peculiar to the work of nature.

Horses, Dogs, and almost every creature, have gotten favour in Gentlemens wits, to have their natures described, but the silly Sheep better every way than they, and more necessary for life, could never attain such kindnesse, as once to get one page written or indited for the safeguard of their natures. I do therefore by these presents from my soul and spirit, invite all Gentlemen and men of learning, not only to give their mind to know the defects of this beast, but also to invent the best remedies that nature can afford, for it is a token of highest mercy unto brute beasts to feed them when they are hungry, and to recover them when they are sick.

Comely and *Virgil* two great *Romans* and such as had attained to some of the greatest place of the Common-wealth, being men of excellent wits and capacity, yet had their names been forgotten and never remembered, if they had not written of rustick and countrey matters, and it is no little honour unto them to have left that behind them in Print, or writing, which themselves had observed from following the Plough. Therefore it shall be no disgrace for any man of what worth soever to bestow his wits upon the Sheep: for certainly it is no lesse worthy of his wit, then it is of his sect; and how necessary it is for the nourishment of man; we all know to this day, and besides there is nothing that so magnifyeth our English Nation as the price of our Wool.

in













*Polladius.*

**Солнцелия**

*Albertus.*

The resemblance between the Sun and the Ram.  
*Macrobius.*

**Cælius.**  
The sign of  
the Ram in the  
Zodiac.

Poetical fictions & riddles

*Arietat in portas & duos oblique postea.*

### And Silver of Dioxin

**Aristat in primis obiectis innumeris membris**

And lo Seneca in his book of Anger, *Magna imperatoris atqueque actus inter se aequarent, cor enullus*: Their rage in  
And indeed great is the violence of Rams for it is reported that many times in *Arctis* to try their  
Violence, they hold betwixt the fighting of Rams a stick, or bat of Corn-tree which in a bout or time,  
we utterly diminish and bruise in pieces.

There is a known fable in *Alphentus*, of the Wolf that found a couple of Rams, and told them that he must have one of them to his dinner, and bad them agree betwixt themselves, to whose lot that death should happen, for one of them must die; the two Rams agreed together, that the Wolf should stand in the middle of the clofe, and that they twain should part one into one corner, and the other into the other corner of the field; and so coming unto the Wolf, and he that came last should lose his life to the Wolfs mercy; the Wolf agreed to this their device, and chose his standing, while the Rams contented with their horns, when they came upon him to make him sure enough from hurting any more Sheep: forth therefore went the Rams, each of them unto his quarter, one into the East, and the other into the West, the Wolf standing joyfully in the midst, laughing at the Rams destruction; then began the two Rams to set forward with all their violence, one of them to attending and observing the other; as that they might both meet together upon the Wolf, and so they did with yshance to their enemy; for having him betwixt their horns they crushed his ribs in pieces, and he fell down without Romach to Rams flesh. ¶ This invention, although it have another moral, yet it is material to be inserted into this place to shew the violence of Rams; and from this came so many warlike inventions called *Arietes*, wherewithal they push down the walls of Cities, as the Readers may see in *Plinius*, *Valerius*, and *Antianus*, for they say that the warlike Ram was made of wood, and covered over with skins of *Tortoise*, to the intent it should not be burned when it was fet to a wall, and it was also covered with the skins of sack-cloth by rows artificially contrived, within the same was a beam which was pointed with a crooked Iron, and therefore called a Ram, or rather because the front was so hard that it overthrow walls, when by the violent strength of men it was forced upon them; and whereas it was shaped over with Tortoise shells, it was for the true resemblance it bare therewith; for like as a Tortoise doth sometime put forth his head, and again sometime pull it in, so also doth the Ram sometime put forth the sicle, and sometime pull it in, and hide it within the frame, so that by this engine they did not over-turn the walls, but also they could the stones to flie upon the enemies like thunder-bolts, striking them down on every side, and wounding with their fall or stroke like the blows of an armed man. and against these forces there were counter-forces devised on the part of the besieged, for because the greatness thereof was such as it could not be moved without singular note and ostentation; it gave the besieged time to oppose against it their instruments of war for their safeguard, such were called

Marital and warlike inventions called Rams.

**Culcitra**

















*Dioscorides.*

**Marcellus.**

**Pliny.**

Even as the skins of other Sheeps newly plucked from their backs and applied warme, do take away the ach, swelling, and pains of stripes and blowes from bodies, so also have the skins of Rams, the same property. *Arnoldus* commendeth a plaister made of a Rams skin for burning, and falling down of the guts, and this is found ready prepared in many Apothecaries shops, and the happy success thereof is much commended by *Alyfius*. If a man take the stones of a fighting cock, and anoint them with Goose grease, and so wear them in a piece of a Rams skin, it is certain that it will colibate and restrain the rage of venereal lust, and a woman wearing about her the right stone of a dunghill cock in a Rams skin, shall not suffer abortion. The washed fleece of a Ram was cold Oyl, putteth the inflammation of the secrets; and likewise the black wool of a Ram in water in water, and then in oyl, and so put to the sick places, keepeth the fundament from falling, and also asswageth the pain. Also the wool of a fighting Ram taken from betwixt his horns, and perfumed into a smoke, easeth the pain, and some take the powder thereof in Vinegar for that Malady. They say that *Laid* and *Solpre* cure the bitings of mad Dogs, and also Tertian and Quartan Agues, with the menthrus purgation taken in a piece of Rams wool, and included in a bracelet of silver. Also they write that a woman shall have an easie travell if she wear in the wool of a Ram, feeling

The broath of the fump of a Ram is commended against blisters. The flesh of a Ram being burnt and anointed upon the body of any leproous person, or any whose body is troubled with Ring-worms or itches, is very effectual to cure them. The same force hath it against the bites of Scorpions, and stings of Serpents, and Algerat: it also being taken in wine, is good for the bitings of mad dogs, and healeth the white skins in the eyes. The fat of a Sheep or Weather hath the same in it, and cureth the suffocation of the womb, and all other diseases incident unto the same in it, parts, and also helpeth places in the body being burnt by fire. The fat of a Ram being mingled with red Arsenick and anointed upon any scall or scab, the same being afterward pared or scraped, doth perfectly heal it. It doth also being mixed with Allum, help those which are troubled with Kibes or Chiblanes in their heels.

*Avicennia*

There are three hops which are hops in a short space, some in six or eight weeks by this Medicine being received. But it is convenient that it be required for three months, and then it will have the more power therein. The Lungs of a Ram while they are hot applied to wounds wherein the flesh doth too much increase, doth both repress and make it equal. The Lungs of small Cattle, but especially of Rams being cut in small pieces and applied whilst they are hot unto bruised places, do very speedily cure them and reduce them to the right colour.

**Матсеїнг.**

The liquor which distilleth from the Lungs of a Ram being boyled, doth heal Tertian Agues, and the disease of the reins which grow therein. The Lungs of a Lamb or Ram being burned, and the dust thereof mingled with Oyl, or being applied raw, do heal the forelegs of Kibes, and are accounted very profitable to be bound upon Ulcers. The Lungs of a Ram being pulled forth, and diseased hot time to the head of any one that is frenzie, will presently help him. Against the pestilence of Sheep, take the pelly of a Ram and boyll it in wine, then being mixed with water, give it to the Sheep to drinke, and it will bring present remedy.

*Æscalopint:*

Marcellus.

The gall of a Ram is very good for the healing of those which are troubled with any pains in the ears, coming by the casualty of cold. The gall of a Ram mingled with his own sweat, doth ease those which are troubled with the Gowt. The gall of a Weather mingled with the wool and placed upon the navel of young children, doth make them loose in their bellies. The stons of an old Ram being beaten in half a penny weight of water, or in three quarters of a pint of Asses milk, are reported to be very profitable for those which are troubled with the falling sickness. The stons of a Ram being drunk in water to the weight of three half pence, cureth the same disease. The dust of the inward parts of a Rams thigh being lapped in rags or clouts, washed very exactly before with womens milk, doth heal the ulcers or runnings of old sores. The dust of the hoof of a Ram mingled with honey doth heal the bitings of a Shrew. The dung of Weathers mingled with Vinegar and fashioned in the form of a Plaster, doth expel black spots in the body, and taketh away all hard bunches arising in the flesh. The same being applyed in the like manner, cureth St. Aubens fire, and heatech burned places.

Pliny.

Sextus.

The filth or sweat which groweth between the thighs of a Ram being mingled with Myrrh and the Herb called Hart-wort, and drunk of each an equal part, is accounted a very excellent remedy for those which are troubled with the Kings evil. But Pliny commendeth the filth of Rams ears mingled with Myrrh, to be a more effectual and speedy remedy against the laid disease.

## The medicines of the Lamb.

Actius.

The best remedy for bitings of Serpents is this, presently after the wound to apply some lute creatures to the same, being cut in small pieces, and laid hot unto it, as Cocks, Goats, Lambs, and young Pigs; for they expel the poison and much ease the pains thereof. An ounce of Lambs blood being fresh before that it doth congeal mixed with Vinegar, and drunk for three days together, is an excellent remedy against the vomiting or spitting of blood. The like force in it hath the blood of a Kid. The blood of a Lamb mingled with wine, doth heal those which are troubled with the falling sickness, as also those which have the foul evil. For the conception of a Woman, take the yard and gall of a Buck, a Kid, and a Hare, with the blood and sweat of a Lamb, and the marrow of a Hart, and mix them all together with Nard and Oyl of Roses, and after her purgation, let them be laid under her, and this without all doubt will make her apt to conceive.

Pliny.

The skins of Serpents being anointed with water in a bath, and mingled with lime and Lambs sweat, doth heal the disease called St. Amands fire. The marrow of a Lamb melted by the fire, with the Oyl of Nuts and white sugar, distilled upon a clean dish or platter, and to drink, doth dissolve the stone in the bladder, and is very profitable for any that pisseth blood. It also cureth all pains or griefes of the yard, bladder or veins. The skin of a Lamb being dawbed or anointed with liquid pitch, and applyed hot unto the belly of any one that is troubled with excoinations of the bowels or of the Bloudy flux, will very speedily cure him, if he have any sense or feeling of cold in him.

Hippocrates.

If a Virgins menstrual fluxes come not forth at the due time, and her belly is moved, it is convenient to apply Lambs skins being hot unto her belly, and they will in short space cause them to come forth. A garment made of Lambs skins is accounted very good for the corroborating and strengthening of young men. The skins of Lambs are more hot then Kids skins, and are more profitable for the confirming of the back and the reins. The little bone which is in the right side of a Kid being bound in a young lambs skin being hot, doth heal both Quartan and all other fevers being applyed thereunto. The dust of Lambs bones is very much and slightly used for Ulcers which have no chaps, or fars in them. The dust of small Cattles dung being mingled with Nard, but especially of Lambs, hath in them great force to heal Cankers; the dust of Lambs bones, is very much commended for the healing and making of green wounds sound and solid, which thing by the *Saracens* is much verified in regard that at all times they go to war, they never forget to take of the same along with them.

Marcellus.

Pliny.

The Lungs of Lambs very effectually cure those whose feet are wrung or pricked by their shoe-soles. The Lungs of Lambs being burned, and the dust thereof mingled with Oyl is very profitable for the curing of knees or ulcers, being applyed thereto. It hath the same virtue being raw and bound upon the fore.

Marcellus.

Pliny.

The runner of a Lamb is of very great force against all other evil medicines, the runners of small Cattle, but especially of a Lamb, is very effectual against all kinds of paylor. The runner of a Kid, a Lamb, and a hind-calf are conveniently taken against Wolf-bane drunk in wine. The runner of a Kid, a Lamb, or a Lamb taken in wine to the weight of a dram is very effectual against the Pox, and cureth the bites or strokes of all Sea-fishes. The runner of a Lamb drunk in water is an excellent cure for the bitings of a Shrew. The runner of a Lamb drunk in water is accounted for a singular cure to young children who are vexed with thicks and colic milk; or if the default hath happen to be gured milk, it will be soon remedied by a Lambs runner given in Vinegar. A Lambs runner bid or poured into water; doth speedily solat the bleeding of the nose, when nothing else can fix it. The gall of small Cattle, but especially of a Lamb being mixed with honey, are thought to be very medicinable for the curing of the falling sickness.

The

The places which are infected by Cankers, being anointed over with the gall of a Lamb are very speedy and effectually healed.

There is also by the Magicians delivered a very speedy means for the curing of the milt, which is this, to take a Lamb new born, and instantly to pluck him in pieces with ones hands, and when the milt is pulled out to put it hot upon the milt of the party to be cured, and bind it on fast with winding bandages, and continually to say, I make a remedy for the milt; then in the last day the same being taken from his body to put it to the Wall of the bed wherein the diseased party is wont to lie, it being first daubed with dirt, that it might the better stick, and so when the dirt with seven and twenty marks, saying at every mark, I make a remedy for the milt, the remedy being done three times it will heal the diseased party, although he be very weak and full of danger. But this is the opinion of the Magicians, which I have set down that they should rather see their folly then believe, knowing them to be meer fopperies. For making the wool to grow flower, the gelders of Cattle fit very much for hairs being pulled away, as also against poison. The dung of Lambs before they have any grass, being dried in the shadow, and rubbed to powder and applyed in the manner of a Plaster, doth heal and ease all kinds of pain in the chaps or jaws. And thus much for the medicines of the Sheep.

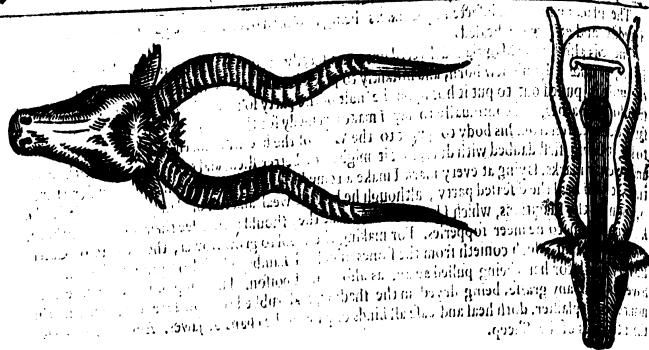
## Of the Strepsiceros.



There is in *Creta* near the Mountain *Ida*, a kind of Sheep called by the Shepherds *Strepsiceros*, *Belonius*, which is not different from the vulgar Sheep, except only in the horns, for they bend not like other, but stand bright and upright like the *Ovis*, and besides are circled about with certain round spears likea Goats horn. This liveth in flocks, and we have here besides the figure of the beast, exprest a double form of their horns, and fore part of their head, the figure of a Harpe being fastned to one of them as it was presently drawn. The description whereof was taken by Doctor *Co* of England, in these words following.

The horns of this *Strepsiceros* are so lively exprest by *Pliny*, and so fixly fixed to bear Harps, that they seem not to aske any further narration of words. I will therefore only add this, they are hollow within, and long, about two Roman feet, and three palms if you measure them, as they are straight; but if you take their quantling and length as they crook a little, then are they about three foot long, they are in breadth where they joynt to the head, three Roman fingers and a half, and their whole compass in that place is about two Roman palms and a half. In the top they are smooth and black, but at the roots they are more dusky and rugged, growing lesser and lesser to a sharp point. They with the dried face did weigh seven pounds and three ounces, and the face which remaineth is joynted to the horns, and likewise the hair of the neck and face. It is said that this Beast is as great as a Hare, having a red hair like a Hart.

But whether his nostrils were so also I could not conjecture, by reason that the age and long use of the piece had defaced the nose which was dried up, and also the hair was worn away, so as it was bald, but by that which was most apparent unto it, I rather inclined that it resembled a Hart, from hence



hence it was that the drawer made the nostrils, less than might answer the proportion of the face, and that which is seen betwixt the horns it is a piece of the neck, by which relation I cannot believe that the *Cretian* or *Idean* Sheep is a *Syrphiceros*, because the horns thereof do not bend at all, although it answereth not the name, but the true horns of the *Syrphiceros* do as I have said resemble the ancient fashion of harps, among our fore-fathers, especially the handle being taken away, and the face of the beast placed in head thereof.

Unto this I may add another horn, which is to be seen in the *Castle* of the *L. William Werbero* Count of *Cimbria*, being black, hollow, and of the length of ones arm, and as thick as a great staff, and it was said, that the beast beareth two of them, which are to be seen among the rare monuments of *Ferdinandus* the Emperor.



**T**he name of this Beast is by the *Grecians* called *Sciurus*, and it was given them from the fashion and proportion of their tail, which covereth almost the whole body, for that which is fabulously said of the *Selapides* to have feet that cover their whole body, is more truly verified of a Squirrels tail, for in the day time being out of her nest, she hideth her self there under both from sun and rain.

The first Author that ever wrote of this Beast was *Oppianus*, who lived in the days of *Augustus Caesar*, and the *Latins* have no proper or native name for it, but borrow from the *Grecians*, although some of the latter writers call it *Pirolus*, and *Spiurus*, I think they would say *Sciurus*; for so it is vulgarly termed in *Latin*: some also call it *Sciurus accurrendo*, because of his nimble running upon boughs. But all the Nations of the world derive their several denominations from the *Grecians*, as the *English* Squirrel from *Sciurus* is not far fetched; the *French* words *Eclairer*, and *Eclairer*, from whom the *German* borrow their words *Eychorn*, or *Eiehorn*, or *Eich horn*, or *Eich bermillin*, that a Weasel of the tree, and *Das Eychorn*.

The

The *Italians* call it *Schirtoob*, and the *Venetians* (as *Maffarum* testifieth) *Schiriat*; the *Spaniards* *Harda*, and *Elquilo*, and some do interpret *Coma dreia* for a Squirrel; the *Ilyrians*, *Weweska*, and some of the *Palatians*, *Wije Wjerka*, and so they turn the Mouse *Varium*, as we have said else where in that story, and some of the *German* call it *Werek*, and *Veob*, and *Feb*.

Now *Albertus* and *Agriola* say, that there is no difference betwixt the Mouse *Varium* and the Squirrel, but only in the Region which altereth the colour, and therefore we have expressed the same figure thereof, remitting the Reader to that which is said in that History, for this (say they) in *Germany* is red after it be a year old, but before that time it is blackish, that is till it be a year old: In *Polonia* it is of a red-ash colour, or branded grysell, in *Russia* of an ordinary ash colour, and for the quantity, food, and manner, or natural inclination, it hath the same in all parts with the mouse *Varium*.

*Varinus* and *Helyscium* say, that the *Grecians* call this beast also *Campscuros*, and *Hippuros*, and some call the *Cappadocian* Mouse *Nexia* a Squirrel; the *Jewes* at this day call a Squirrel *Coach*, for it is apparent that in ancient time till they came into these parts of the world into *Gretia* and *Europe*, they never knew or saw this beast. And this shall suffice to have said of the name.

A Squirrel is greater in compass than a Weasel, but a Weasel is longer than a Squirrel, the back parts and all the body is red, except the belly which is white. In *Helvetia* they are black and branded, and they are hunted in the Autumn at the fall of the leaf, when the trees grow naked, for they run and leap from bough to bough in a most admirable and agile manner, and when the leaves are on, they cannot be so well discerned. They are of three colours, in the first age black, in the second of a rusty Iron colour, and last of all when they be stricken in age, they are full of white hoar hairs: Their teeth are like the teeth of Mice, having the two under teeth very long and sharp, their tail is always as big as their body, and it lyeth continually upon their back, when they sleep or sit still; It seemeth to be given them for a covering as we have said already. The maw-gut differeth from all other, for it is *Cocorum*, that is, as I take it without a passage out of it into any other part than the other guts, or like a mans bladder; and it is as great as their ventricle, which in dissection hath been found full stuf with excrements. The genital is like a bone, as *Vesalius* writeth.

They use their forefeet in stead of hands, for they sit upon their buttocks, and move their meat to their mouth with them, in this point resembling every little vulgar Mouse, yet being put to the mouth, they hold it in their teeth. They will eat Nuts and Almonds very greedily, and also Apples, Buckmalts, Acorns, and sometimes herbs, especially Lettice, and all other sweet fruits. Their feet are cloven like Mice, and their hinder parts very fleshy to sit upon. In the summer time they build them nests, (which in our Countrey are called *Drayer*) in the tops of the trees, very artificially of sticks and moss, and such other things as woods do afford them.

The mouth of their nest is variable, sometimes at the sides, and sometimes at the top, but most commonly it is shut against the winde, and therefore I think that she maketh many passages, stopping and opening them as the winde turneth. In Summer time they gather together abundance of fruits and Nuts for winter, even so much as their little *Dray* will hold and contain, which they carry in their mouths, and they lodge many times two together, a male and female (as I suppose.) They sleep a great part of the Winter like the *Alpine* Mouse, and very soundly, for I have been when no noise of hunters could awake them with all their cries, beating their nests on the outside, and shooting bolts and arrows thorough it, until it were pulled asunder, whereat many times they are found killed before they be awaked.

They are of incredible agility and motion, never standing still, as it appeareth by them which are tamed. When they leap from tree to tree, they use their tail in stead of wings, which is most apparent, because many times they leap a great distance and are supported without sinking to mans appearance.

And again I have seen them leap from the top of very high trees down to the ground in such an ordinary pace as Birds flie from trees to light on the earth, and receive no harm at all: for when they are hunted, men must go to it with multitude, for many men cannot take one with bows and bolts with Dogs, and except they start and rouse them in little and small slender woods, such as a man may shake with his hands; they are seldom taken.

Bowes are requisite to remove them when they rest in the twists of trees, for they will not be much terrified with all the howling, except now and then they be struck by one means or other. Well do they know what harbour a high Oak is unto them, and how secure they can lodge therein from Men and Dogs, therefore seeing it were too troublesome to climb every tree, they must supply that business by labor with bowes and bolts, that when the Squirrel resteth, presently she may feel the blow of a cunning Archer, he need not fear doing her much harm, except he hit her on the head, for by reason of a strong back-bone and fleshy parts, she will abide as great a stroke as a Dog; yes, I have seen one removed from a bough with a shot to the ground.

If they be driven to the ground from the trees to creep into hedges, it is a token of their weariness, for such is the stately mind of this little Beast, that while her limbs and strength lasteth, she tarryeth and saveth her self in the tops of tall trees, then being descended, she falleth into the mouth of every Cur, and this is the use of Dogs in their hunting.

The admirable wit of this Beast appeareth in her swimming or passing over the Waters, for when hunger or some convenient prey of meat constraineth her to passe over a river, she seeketh out some rinde or small bark of a Tree which she setteth upon the water, and then goeth into it, and

X x 3

and

and holding up her tail like a sail, let the wind drive her from the other side, and this is witnessed by *Olaus Magnus* in his description of *Scandinavia*, where this is ordinary among Squirrels, by reason of many rivers, that otherwise they cannot pass over; also they carry meat in their mouth to prevent famine whatsoever befall them, and as Peacocks cover themselves with their tails in hot Summer from the rage of the Sun, as under a shadow, with the same disposition doth the Squirrel cover her body against heat and cold.

They grow exceeding tame and familiar to men if they be accustomed and taken when they are young, for they run up to mens shoulders, and they will oftentimes sit upon their hands, creeping into their pockets for Nuts, go out of doors, and return home again; but if they be taken alive, being old, when once they get loose, they will never return home again, and therefore such may well be called *Semiferi* rather than *Cleures*.

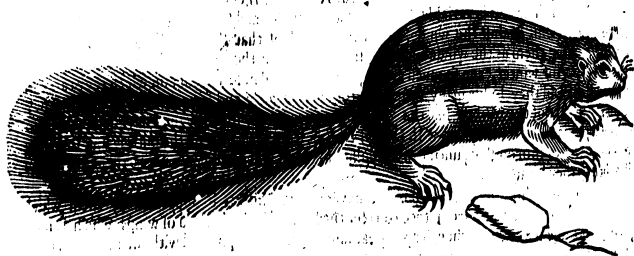
They are very harmful, and will eat all manner of woollen garments, and if it were not for that discommodity, they were sweet-sportful beasts, and are very pleasant playfellows in a house.

It is said, that if once they taste of Garlick, they will never after bite any thing, and this is preferred by *Cardan* to tame them, their skins are exceeding warm, and well regarded by skimmers, for their heat is very agreeable to the bodies of men, and therefore they are mixed also with the skins of Foxes. Their flesh is sweet, but not very wholesome, except the Squirrel were a black one. Its tender and comparable to the flesh of Kids or Conies, and their tails are profitable to make brushes of.

The medicines are the same for the most part which are before expressed in the Dormouse, saving that I may add that of *Archigenes*, who writeth, that the fat of a Squirrel warmed on a rubbing cloth, and so infused into the ears, doth wonderfully cure the pains in the ears. And so I conclude this history of the Squirrel with the Epithets that *Martial* maketh of a Peacock, a Phoenix, and a Squirrel, in a comparison of a beautiful Virgin *Brieton*.

*Cui comparatus indecens erat puero,  
Inamabilis sciurus, & frequens Phoenix.*

Of the *Genlian Squirrel*, described and figured by *Doctor Key*.

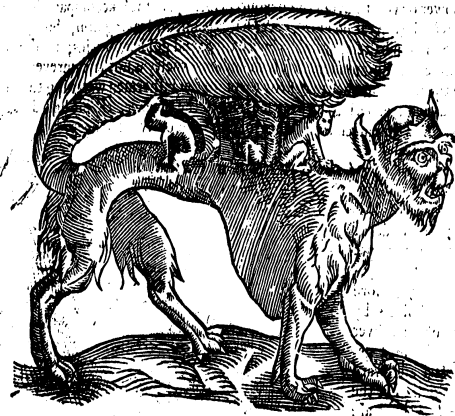


**T**his *Genlian* or *Barbarian Squirrel*, is of mixt colour, as it were betwixt black and red, and from the shoulders all along to the tail by the sides, there are white and russet streaks or lines, which in a decent and seemly order stand in ranks or orders; and there be some of these Squirrels which have such lines of white and black, with correspondent lines in the tail, yet they cannot be seen except the tail be stretched out at length, by reason there is not much hair upon it. The belly seemeth to be like a blew colour upon a white ground. It is a little less than the vulgar Squirrel, and hath not any ears extant or standing up as that, but close pressed to the skin round, and sitting up little in length by the upper face of the skin. The head is like the head of a Frog, and in other things it is very like the vulgar Squirrel, for both the outward shape, the manner, and behaviour, the meat and means of life agree in both, and the skin covereth her body like other Squirrels. This picture and description was taken by him from one of them alive, which a Merchant of *London* brought out of *Barbery*.

They are very pleasant and tame, and it is very likely that it is a kinde of *Egyptian* or *African* Mouse, whereof there are three sorts described by *Herodotus*, the first called *Buprestes*, the second *Zegrel*, and the third *Echinos*, of which we have already spoken in the story of divers kinde of Mice, and therefore I will here end the discourse of this Beast.

Of

Of a Wilde Beast in the New-found World called *Sn*.



**T**here is a Region in the New-found World, called *Gigante*, and the Inhabitants thereof are called *Pentagons*; now because their Country is cold, being far in the South, they clothe themselves with the skins of a Beast called in their own tongue *Sn*; for by reason that this Beast liveth for the most part near the waters, therefore they call it by the name of *Sn*, which signifieth water. The true Image thereof as it was taken by *Tobias*, I have here inserted, for it is of a very deformed shape, and monstrous presence, a great ravening and untamable wilde Beast. When the Hunters that desire her skin let upon her, she flyeth very swift, carrying her young ones upon her back, and covering them with her broad tail: now for so much as no Dog or Man dareth to approach near unto her, (because such is the wrath thereof, that in the pursuit she killeth all that cometh near her,) the Hunters dig several pits or great holes in the earth, which they cover with boughs, sticks, and earth, so weakly that if the Beast chance at any time to come upon it, she and her young ones fall down into the pit and are taken.

This cruel, untamable, impatient, violent, ravening, and bloody Beast, perceiving that her natural strength cannot deliver her from the wit and policy of men her hunters, (for being inclosed, she can never get out again,) the Hunters being so hand to watch her downfall, and work her overthrow, first of all to save her young ones from taking and taming, the destroyeth them all with her own teeth; for there was never any of them taken alive; and when she seeth the Hunters come about her, she roareth, cryeth, howleth, brayeth, and uttereth such a fearful, noysome, and terrible clamor, that the men which watch to kill her, are not thereby a little amazed, but at last being unmindred, because there can be no resistance, they approach, and with their darts and spears wound her to death, and then take off her skin, and leave the carcass in the earth. And this is all that I finde recorded of this most savage Beast.

Of the *SHBUS*, called a Wilde Waret-Sheep.

**T**his Beast is called by *Opplamus Senber*, and therefore the Latins call it *Shbus*. *Bushman* in his interpretation of *Opplamus*, doth make it one beast with the *Strepsichus*, but because he expresseth no reason thereof, it is like that he was deceived by his picture, for we shall manifest, that either the colour or fear of living, cannot agree with the *Strepsichus*, for he saith only it is the same Beast which *Phy* calleth a *Strepsichus*.

But we know by the description of *Opplamus*, that this Beast is of a red-gold-colour, having two long armed horns on the head, and liveth sometimes in the Sea, and Water, sometime on the land. Of all kinde of Sheep this is the worst and most harmful, ravening after life and blood; for it goeth to the water, and therein swimmeth: when the filly simple fishes see this glorious thing in the waters, admiring the horns, and especially the golden colour, they gather about him in great numbers and abundance, especially Shrimps, Lobsters, Mackerell, and Tencher, who follow him with singular delight on either side, both the right and the left, pressing who shall come nearest, to touch and have







The food of Swine.

It is most certain that Swine are of a hot temperament, and for that cause it cometh to pass that they do not loose their Winter hair, for by reason of the fat near to their skin, there is abundance of heat which keepeth fast the roots of the hair. Their food therefore and nourishment is easily digested in every part, for that which is so strong in the nouriture of the hair, must needs be of correspondent power in other parts. Some have thought that Swine care not for grass or herbs, but only roots, and therefore hath a peculiar snout to attain them, but I finde by experience, that they will eat grass above the earth, as well as roots beneath, and they love to feed in herds together. They love above measure Acorns; and yet being given to them alone they are hurtful, and bring no less damage to them than to Sheep, (though not so often) especially to Sows that be with Pig. The best time for gathering of Acorns is in November, and it is a work for women and children. The Woods of Italy are so full of Acorns, that they nourish abundance of Swine, and that therewith are fed the greatest part of the Roman people.

Nigidius.

Pliny.

They delight also in Buck-mast, and that meat maketh the Swines flesh light, easie of digestion, and apt for the stomach: In some Countries Haws have the same vertue so fat Hogs, that is in Acorns, for they make them waighy, straight, neat, and sweet. The next unto this Holm-berris do fat Hogs, saving that they procure looseness, except they be eaten by little and little. There is a tree which hath such bitter fruit (called *Haliphloeum*) whereof no beast will take, herof Hogs will tast, but in extreame fatnin and hunger, when they are without all other food and meat.

The fruit or Apples of Palm-trees (especially such as grow in salt grounds near the Sea sides, as in *Cyrene* of *Africa*, and *Judea*, and not in *Egypt*, *Cyprus*, *Syria*, *Helvetia*, and *Affrica*) do fatten and feed Hogs: And indeed there is scarce any food whereof they do not eat, as also no place wherein they pick not out some living, both in Mountains and Fens, and plain fields, but best of all near waters, wherein by the banks sides they gather many sweet and nourishable morsels.

Places of their abode.

There are no better abiding places for Hogs than are the Woods, wherein abound either Oaks, Beeches, Cork-trees, Holm, wilde Olives, Tamarisk, Hasels, Apples, or Crab-trees, white Thorn, the *Greek Carob*, Pine-trees, Corn-trees, Lote-trees, Prune-trees, Shrubs, Haws, or wilde Pear, or Medlers, and such like; for these fruits grow ripe successively one after the other, for there is no time of the year wherein some of them are not to be gathered soft and nourishable, whereby the herds of Swine may be maintained.

But if at any time this food cease, and not to be found, then must there be some other provision out of the earth, such as corn, or grains, and turn your Hogs to moist places, where they may pick up worms, and suck up fat fenny water, which thing is above all other things grateful to this beast; for which cause it pleased the holy Ghost in Scripture, to compare the pleasure that beastly men take in sinning, to the wallowing of Swine in the mire. *The Dog* (saith *S. Peter*) *is returned to his vomit, and the Sow that was washed to wallow in the mire.* For this cause also you must suffer them to dig in the water, and to eat Canes and wilde Bulrushes, likewise the roots and tops of Water-creffes; and you must provide to lay up for them in water Acorns, and not spare corn to give it them by hand, as Beans, Pease, Fitches, Barly, and such like. Add *Calumella* (from whom I have taken these instructions) addeth moreover, that in the Spring time before your Hogs go abroad to bite at the sweet and freshest growing herbs, lest they provoke them to looseness, you must give them some sodden drink, wash or swill, by vertue whereof that mischief must be avoided, for if it be not, such leanness will follow, that it will overthrow and kill them.

Varro.

Elian.

In some Countries they also give them the scapes or refuse Grapes of Vintage, and moreover the fruits of yew tree, which is payson to Dogs. *Aristomachus* the *Athenian* by many and sundry praises advanceth three-leaved-grais, and among other, for that as when it is green it is commodious for Sheep, so being dried it is wholesome to Swine. They love green corn, yet it is reported, that if Swine eat of it in the Isle of *Salamine*, their teeth by the law of the Country are beaten out of their mouths: It is wholesome to give them crude or raw Barly, especially to a Bore when he is to couple with a Sow, but unto a Sow with Pig-fod.

There is in *Benaria* a kinde of Scallion which beareth a red purple-flower, like to the flower of the Lilly of the Vallies, which is greatly sought after and devoured by Swine. They also feed after wilde Vines, and the herb called Hogs-bread, and the root of wilde rapes, which beareth leaves like unto Violets, but sharper, and a white root without milk: By some it is called *Bochpick*, because it groweth in Woods among Beeches. They eat also flesh, and abstain not from fat Bacon, and herein they differ from most of the ravening creatures, for Dogs will not taste of Dogs flesh, and Bears of Bears, yet will Hogs eat of Swines flesh, yea many times the dam eateth her young ones: And it is found that Swine have not abstain'd from the flesh of men and children, for when they have been slain by thieves, before they could be found, the greatest part of their body was torn in pieces and eaten by wilde Swine: And indeed as we see some Hens eat up the Eggs that they themselves have laid, so shall we observe some Sows to devour the fruits of their own wombs, whereat we ought not to marvel as at a monstrous prodigious thing, but rather acknowledge a natural voracity, constrained in them through famine and impatience.

Albertus.

Elian.

They also eat Snails and Salamanders, especially the Boars of the Mountains in *Cilicia*, and although there be in Salamanders a very deadly payson, yet doth it not hurt them at all, but after

afterward when men or beasts tast of such a Swines flesh, the operation of the payson worketh upon them mortally: neither is this any marvel, for so it is when a Frog eateth of a Toad: and whereas if a man eat Hemlock, presently all his blood congealeth in his body and he dyeth, but if a Hog eat thereof, he not only not dyeth, but thriveth and groweth fat thereby. *Aristotle* reporteth one great wonder of a place about *Thracia* (as he saith) wherein for the compass of twenty paces there groweth Barly, whereof men eat safely, but Oxen and Sheep, and other creatures avoid it as mortal payson, and Swine will not vouchsafe to tast of mens excrements that have eaten thereof, but avoid them carefully.

As Swine delight in meat, so also they delight more in drink, and especially in the Summer time, and therefore they which keep sucking Sows, must regard to give them their bellyful of drink twice a day, and generally we must not lead them to the waters as we do Goats, and Sheep, but when the heat of Summer is about the rising of the Dog-star, we must keep them all together by water sides, that so they may at their own pleasure, both drink and lie down to wallow in the mire, and if the coasts be so dry that this cannot be obtained or permitted, then must they have water set in troughs and vessels, whereof they may tast at their own pleasure, for otherwise through want of water they grow Liver and Lung sick.

The merry water doth most quickly make them fat, and they will drink Wine or Beer unto drunkenness, and in those Countries where Grapes grow, if the Swine come into the Vintage, they grow drunk with eating of Grapes. Also if the Lees of Wine be mingled with their meat, they grow fat above measure and fenselers in their fat, whereby it hath been seen that a Moufe hath eaten into the sides of a Hog without the resistance of the beast: and the like is reported by *Pliny* of the body remaining immovable. And in the Spring time Swine of their own accord grow so fat, that they are to be removed, they are not to be droven but to be carried in a Cart.

*Varro* and *Crescensius*, do report admirable things of the fatness of Swine. For first *Varro* saith, that he received knowledge from a credible honest man in *Portugal*, of a Swine that there was killed, the offall whereof with two ribs was sent to *Voluminus* a Senator, which weighed twenty and three pounds, and the fat betwixt the skin and the bone, was a foot and three fingers thick. Unto this onestherein, after she made a nest: which thing he likewise affirmeth of a Cow. And *Crescensius* reporteth of an other *Lusitanian* Swine, which after the death, weighed five hundred seventy five pounds, and the Lard of that Hog was one foot and three fingers broad. And the like may be said of a Hog at *Basil*, nourished by a certain Oyl-man, in whose Lard or fat, after his death were found many passages of mice to and fro, which they had gnawed into his body without the sense of the beast. Hogs grow fat in short time. In ancient days (as *Pliny* writeth) they put them up to fattening three days, and first of all they made them fast three days together, after six days they may best manner and sensibly be perceived to grow fat. There is not any beast that can better or more easily be accustomed to all kinds of food, and therefore doth very quickly grow fat, the quantity and stature of their body considered; for whereas an Ox or Cow, or Hart, or such like Beasts aske long time, yet a Swine which eateth of all sorts of meat, doth very quickly even in a moneth or two, or three at the most, prove worthy the knife and also his Masters table, although in some places they put them up to fattening a whole year together, and how much they profit & gather in their feeding, it is very easie for them to observe that dayly keep and attend them, and have the charge and overseeing of them.

And there must be had great care of their drink. In *Thracia*, after they put up a Hog to fattening, they give him drink the first day, and then let him fast from drink two days, and so give him drink by that proportion till the seventh day, afterward they observe no more diet for their Swine, but give them their fill of meat and drink till the slaughter day. In other Countries they diet them in this sort: After Beans and Pease they give them drink abundantly, because they are solid and hard; but after Oats and such like, as meal, they give them no drink, lest the meal swim up and down in their belly, and so be ejected into the excrements without any great profit. There is nothing wherein it liveth, but thereby it will grow fat except grazing, and therefore all manner of grain, Millet seed, Figs, Acorns, Nuts, Pease, Apples, Cucumbers, Roots, and such things cause them to rise in flesh gratefully, and so much the sooner if they be permitted to root now and then in the mire.

They must not be used to one simple, or unmingled, or uncompounded meat, but with divers compounds, for they rejoyce in variety and change like other beasts, for by this mutation of food, they are not only kept from inflammation and windiness, but part of it alway goeth into flesh, and part into fat.

Some use to make their sty wherein they are inclosed to be very dark and close, for their more speedy fattening, and the reason is good, because the beast is more apt to be quiet. You shall have Bakers that will fat their Hogs with Bran; and in *Elstia* a Countrey of *Germany*, they fat them with Bean-meal, for thereby they grow fat very speedily, and some with Barly-meal wet with flat milk. And in the Alpes they fat them with Whay, whereby their fat and flesh groweth more white and sweet then if they were fattened with Acorns, yet Whay is very dangerous: for such is the ravening intemperancy of this beast, to swill in whatsoever is pleasant to his tast, that many times in drinking of Whay their bellies grow extended above measure, even to death, except that they be diered by a wile keeper, and driven up and down not suffered to rest till it flow forth again backward.

Y y

Barly







the thickest skins, are accounted the most blockish and farthest from reason, but those which have the thinnest and softest, are the quickest of understanding; an example whereof is apparent in the Oyster, Ox, and Ape. They have a marvellous understanding of the voice of their feeder, and as ardent desire to come at his call, through often custom of meat, whereupon lyeth this excellent story.

Ælianus.

When certain Pirates in the *Tyrrhene sea*, had entered a Haven, and went on land, they came to a Swine's stile, and drew out thereof divers Swine, and so carried them on Shipboard, and losing their Anchors and tacklings, do depart and sail away. The Swineherds seeing the Pirates commit this robbery, and not being able to deliver and rescue their Cattle, because they wanted both company and strength, suffered the Thieves in silence to ship and carry away their Cattle; at last, when they saw the Thieves rowing out of the Port, and launching into the deep, then they lift up their voices, and with their accustomed cries or calls, called upon their Swine to come to their meat; as soon as the Swine heard the same, they presently gat to the right side of the Vessel of Bark, and there flocking together, the ship being unequally ballanced or loden, overturned all into the Sea, and so the Pirates were justly drowned in reward of the theft, and the Stole Swine swam safely back again to their Masters and Keepers.

The nature of this Beast is to delight in the most filthy and noisome places, for no other cause (as I think) but because of their dull senses. Their voice is called *Grunnium* grunting; *Sordida su palcos rursus gramina grunit*; which is a terrible voice to one that is not accustomed thereunto, (for even the Elephants are afraid thereof) especially when one of them is hurt or hanged full, or bitten, then all the residue as it were in compassion condoling his misery, run to him and cry with him, and this voice is very common in Swine at all hands to cry, except he be carried with his head upwards towards heaven, and then (it is affirmed) he never cryeth, the reason whereof is given by *Aphrodisian*: because it is always accustomed to look downward, and therefore when it is forced to look upwards it is suddenly appalled and afraid, held with admiration of the goodly space above him in the heavens, like one astonished, holdeth his peace (some say that then the artery of his voice is pressed) and so he cannot cry aloud. There is a fish in the river *Achelus* which grunteth like a hog, whereof *Juvenal* speaketh, saying: *Et quam remigibus grammis Elysiæ porci*. And this voice of Swine is by *Cælius* attributed to drunken men. The milk of Swine is very thick, and therefore cannot make whay like a Sheeps; howbeit it suddenly coagulateth and congealeth together.

Among divers males or Boars when one of them is conqueror, the residue give obedience and yeeld unto him, and the chief time of their fight or discord is in their lust, or other occasions of food; or strangeness, at which time it is not safe for any man to come near them, for fear of danger from both parties, and especially those which wear white garments. And *Strabo* reporteth in general of all the *Belgian* Swine, that they were so fierce, strong, and wrathful; that it was as much danger to come near them as to angry Wolves. Nature hath made a great league betwixt Swine and Crocodiles, for there is no beast that may so freely feed by the banks sides of *Nile*, as the Swine may, without all hurt by the Crocodile. Other Serpents, especially the smaller Serpents, are oftentimes devoured by Swine. *Aristotle* saith, that when many of them are together they fear not the Wolf, and yet they never devour any Wolf, but only with their snoring and grunting noise fear them away. When a Wolf getteth a Swine, he devoureth him, and before he can eat him draggeth him by the ears to some water to cool his teeth in his flesh (which above measure burn in devouring his flesh.) It hath been seen that a Lion was afraid of a Sow, for at the setting up of his bristles he ran away.

It is reported that Swine will follow a man all the day long which hath eaten the brain of a Crow in his pottage; and *Nigidius* affirmeth, that Dogs will run away from him that hath pulled off a tick from a Swines back. The people of *Mæssænum* did engender Man with Woman publicly like Swine; and *Stobæus* writing against Women saith, that some of them are derived from one beast, and some from another, and namely a woman descended of a Sow sitteth at home, and doth neither good nor harm: but *Simonides* writeth otherwise, and namely that a Woman born of a Sow sitteth at home suffering all things to be impure, unclean, and out of order, without decking, dressing or ornament, and so she groweth fat in her unwashed garments. And there are many fictions of the transforming into Swine. *Homer* saigneth that the companions of *Ulysses* were all by *Circæ* turned into Swine, which is interpreted in this manner, *Circæ* to signifie unreasonable pleasure, *Ulysses* to signifie the soul, and his companions the inferior affections thereof, and so were the companions of *Ulysses* turned into Swine by *Circæ*. When unreasonable pleasures do overcome our affections and make us like Swine in following our appetites: and therefore it was the counsell of *Sonæus*, that no man should at banquet eat more then sufficient, and those which could not abstain from them, should forbear their company that perswaded them to eat when they were not hungry, and to drink when they were not thirsty, and therefore he supposed that it was said in jest that *Circæ* turned men into Swine. When as *Ulysses* by his own abstinence and *Mercury* his counsell, was delivered and saved from that most savage transformation, which caused *Horace* thus to write;

*Ulysses si bibisset pocula Circæe — Cum scilicet  
Vivisset canis immodicus vel amica lusa sua.*

Xenophon.

And

And from this came the original proverb of *Forcellus Aspidianus* for a tender and delicate person, used so to saiten, that all peny is death unto him. Sweet favours as we have shewed already, are very hurtful to Swine; especially the sweet oyl of *Maiorham*. Whereupon came the proverb *Nili sum amaracino sui*; and *Lucretius* speaketh hereof in this sort;

*Deniq; amaracinum fugiunt sui; et times omne  
Unguentum: nam sitigeris subus acre venenum est.*

And for this cause *Tullius Cicero* saith, *Illi alabastrum patet unguenti plena*; that is, a box of Alabastr full of ointments is displeasing to this Beast, for as the *Scabæe* or Horse fle forlaken sweet places to light and sit upon Horse dung, even so doth Swine. There be many of the ancients that have delivered merrily *Antia suis pro sale*, that the Swines soul is in their body but in stead of salt to keep the flesh from stinking, even as for no other purpose many among men seem to live and retain foul in body. They are very clamorous, and therefore are used for talking and prating fellows, whereupon the Greek Poet *Lucilius* translated by *Erasmus* bludeth, when he saith in this manner, under *Alia Menecles, alia porcelus loquitur*;

*Sucula, bos, & capra mihi perire Menecles,  
Ac merces bonum nomine pensa tibi est.  
Nec mihi cum Othyrae quicquam estve fuisse negoi,  
Nec fures ullos buc cito Thermopylae.*

*Sed contra Eutychidem nobis li: proinde quid hic mi  
Aut Xerxes facti, aut quid Lacedæmonii?  
Ob patium & de meloquere, aut clamavero clare,  
Multo aliud dicit sui, aliud Menecles.*

And to conclude, in *Latin* they say *Sus Minervam*, when an unlearned dunce goeth about to teach his better or a more learned man, then doth the Hog teach *Pallas*, or as we say in *English*, the foul Sow teach the fair Lady to spin.

There are in Swine many prefaces and foretokens of foul weather, his Swineherds have observed: as first if they lie long wallowing in the mire, or if they feed more greedily then they were accustomed, or gather together in their mouths, hay, stubble, or straw, as *Aratus* writeth; or if they leap and dance, or frisk in any unwonted sort: and for their copulation, in years that will prove moist, they will ever be boring, but in dryer years they are lesse libidinous.

The greatest harm that cometh by Swine is in rooting and turning up of the earth, and this they do in Corn fields, for which we have shewed that the *Egyptians* made a law to beat out the teeth of such Swine: for this cause *Homer* writeth that *Iris* threatneth *Ulysses*, because his companions at up all his corn, to knock out their teeth: yet sometimes the husbandmen admit them of purpose, both into their land before it be plowed, and also into their vineyards. It is said that the *Egyptians* forbear to sacrifice them, because they tread in their Corn in their fields after it is sowed out of the earth, so as the Birds cannot gather it up again, as we have shewed before. The *Jews* and the *Egyptians* accounted this Beast most unclean. The *Jews*, not as the vain *Gentiles* imagined, because they worshipped it, for that it taught men to plow the earth, but for the Law of God. And the *Egyptians* hold it a profane thing, and therefore they had an antient law, that no Swineherd should come into their Temple, or that any Man should give him his Daughter in Marriage. It is very certain that they were wont to be used in sacrifices. The said *Egyptians* never sacrificed them to the Moon and to *Bacchus*, and at other times it was unlawful, either to offer them, or to eat them: but it seemeth by many Authors, that their first sacrifices were of Swine, for we read of antient customs in *Hetruria*, that at their marriage feasts they offered and sacrificed a Sow to *Venus*, and at other times, especially in Harvest, they did so to *Ceres*. The *Lains* do hold a Swine very grateful and sacred to *Jupiter*, because as they believed that a Sow did first of all lend her paps to him, and therefore all of them worship a Sow, and abstain from her flesh. Likewise in *Myfia* and *Phœnicia*, there were Temples of *Jupiter*, wherein it was forbidden to sacrifice or kill Swine by a publick Law, like as it was amongst the *Jews*. When the Kings of *Sparta* were first of all chosen into that royal place, they were permitted to execute the Priests office, and to the intent that they might never want sacrifices, there was a privilege granted them to take a Pig of every Sow: and when they sacrificed to *Jupiter* a Swine, it must be after or at a triumph: they were also sacrificed to *Nephtis*, because they were impetuous and ranging Beasts; and a Boar was holy to *Mars*, according to this saying of *Pomponius in Atellana*, *Mars tibi sacrificum, si unquam rediero, bidentem verræ*. And there was a custom among the *Athenians*, when a Man had slain an hundred enemies, he was permitted to offer up to *Mars*, some part of a man at *Lemnos*, and afterward they grew out of liking of this vain custom, and in stead thereof sacrificed a Barrow or gelded Hog, and when they about three times with pomp and stately procession, and at last flew and offered them to *Mars*. They were wont to sacrifice a Hog for a Man that had recovered his wits after he had been mad, and also they sacrificed Swine to *Silvanum*, according to these Verses;

*Cædere Silvanum porcum quadrante lavari:  
And again;  
Tellurem porco Silvanum lacte probant.*

Their



*Ita licet currat de vertice montis, aquosa  
Carina erit, pluri sed tamen apia pila est.  
Hinc feritas silvæ, hincq; damna, et hinc  
Post mellis postea rursusq; lepore.*

And whereas *Hippocrates* commended Swines flesh for Champions and Combatants; it is certain, that *Bilis* the Champion through eating of Swines flesh, fell to such a height of choleric, that he cast it upwards and downwards.

When the womb of a Woman is ulcerated, let her abstain from all Swines flesh, especially the eldest and the youngest. It is not good for any man to taste or eat this flesh in the Summer time, or any hot weather, for then only it is allowed when extreme frosts have tempered it for mans stomach, and the stomach for it: the flesh of wilde Swine is most of all hurtful to them that live at ease, without exercise, because that they are immediately given to sleep. Some are of opinion that a sow which is killed immediately after the Boar hath covered her, is not so wholesome as others: *Hilicababai* observed this custom, to eat one day nothing but Pheasant Hens, another day nothing but Pullen, and the third day nothing but Pork.

*Erasmus.  
Macrobius.*

There was in ancient time a dish of meat called *Trojan Hog*, in imitation of the *Trojan Horse*, for as that was stuffed within with many armed men, so was this with many several meats, and whole Beasts, as Lambs, Birds, Capons, and such like, to serve the appetites of the most strange belly-gods, and Architects of gluttony: and therefore *Cicero* in his oration, wherein he persuaded the Senators and people to the law *Fannia*, reproves this immoderate riot in banquets, *In apponendo mensis porcum Trojanum*; and indeed it wanted not effect, for they forbade both *Porcum Trojanum*, and *Callum Aptugnum*.

There was another Raven-monster-dish (called *Pinax*) wherein were included many Beasts, Fowles, Egges, and other things which were distributed whole to the guests: and no marvel, for this Beast was as great as a Hog, and yet gilded over with silver. And *Hippobolus*, in his Epistle to *Lycus*, speaking of the banquet of *Caramis*, saith thus, *Alatus est nobis etiam porcus*. *dimidia parte diligenter assu*, *five tostus*, *et dimidia altera parte tanquam ex aqua mollior elixum*, *mira etiam coqui industria ita parum*, *ut qua parte jugularum esset*, *et quomodo varis deliciis refertus ejus venter non appareat*. There was brought to us a Hog, whereof the one half was well roasted, and the other half or side well sod, and this was so industriously prepared by the Cook, that it did not appear where the Hog was slain or received his deadly wound, nor yet how his belly came to be stuffed with divers and sundry excellent and delicate things. The Romans had a fashion to divide and distribute a Hog, which appeareth in these Verses of *Marital*;

*Vobiscum*

*Iste tibi faciet bona Saturnalia porcum,  
Inter fumantes illic passum apros.*

And of the eating of a sucking Pig, *Marital* also writeth in this manner;

*Latæ vero passum pigra mihi matris alumnus  
Ponat, et Astelo de sue dices edat.*

I might add many other things concerning the eating and dressing of Swines flesh, both young and old, but I will passe it over, leaving that learning to every Cook, and Kitchen-boy.

Concerning Bacon, that which is cald by the *Latins*, *Perna*, I might add many things, neither improper, nor impertinent, and I cannot tell whether it should be a fault to omit it in this place. The word *Perna* after *Varro*, seemeth to be derived from *Pede*, but in my opinion, it is more consonant to reason, that it is derived from the Greek word *Perna*, which is the ribs and hips of the Hog hanged up and salted, called by *Marital* *Petalo*, and by *Plinius* *Ophthalmia*, *Horum*, *Sambum*, and *Laridum*;

*Palladius.*

*Quanta pecus pestis veniet, quanta labes larido.*

The time of the making of Bacon, is in the Winter season, and all the cold weather, and of this *Marital* writeth very much in one place;

*Museum est, propra, charos ne differ amicos.  
Nisi mihi cum vetulo sit pesonem nihil.*

And again

*Et pulam dubio de pesonem voras.  
—Griana mihi fiet, vel massa licebit  
De menapio lauti, de pesonem vorant.*

*Strabo* in his time commended the Bacon of the *Gauls*, or of *France*, affirming that it was not inferior to the *Asian* or *Lycon*, an old City of *Spain* (called *Pompelo*) neer *Aquitania*, was also famous for

for Bacon. They first of all killed their hogs, and then burned or scalded off all their hair, and after a little season did slit them assunder in the middle, laying them upon salt in some tub or deep trough, and there covering them all over with salt, with the skin uppermoist, and so heap fitch upon fitch, till all be salted, and then again they often turned the same, that every part and side, might receive his season, thus, after five daies; laying them undermoist which were uppermoist, and those uppermoist which were undermoist. Then after twelve daies salting, they took all out of the tub or trough, rubbing off from it all the salt, and so hanged up two daies in the wind, and the third day they all to anoint it with oyl, and did hang it up two daies more in the smoak; and afterward take it down again, and hang it or lay it up in the larder, where all the meat is preserved, still looking warily unto it, to preserve it from Mice and Wormes: And thus much shall suffice at this time for the flesh of Hogs, both Pork and Bacon.

The milk of a Sow is fat and thick, very apt to congeal, and needeth not any runnet to turn it; it breedeth little whay, and therefore it is not fit for the stomach, except to procure vomiting, and because it hath been often proved, that they which drink or eat Sow milk fall into scurfs and Leprosies, (which diseases the *Asians* hate above all other) therefore the *Egyptians* added this to all the residue of their reasons, to condemn a Sow for an unclean and filthy beast. And this was peculiarly the saying of *Manethon*.

With the skins of Swine which the *Grecians* did call *Phorine*, they made shoe-leather, but now a days by reason of the tenderness and looseness thereof, they use it not, but leave it to the Sadlers, and to them that cover Hooks, for which cause it is much better then either Sheep or Goats skins, for it hath a deeper grain, and doth not so easily fall off. Out of the parings of their skins they make a kind of glew, which is preferred before *Taracolum*, and which for similitude they call *Chibrocolum*. The fat of Swine is very pretious to liquor shoos and boots therewithal. The Amber that is in common use groweth rough, rude, unpolished, and without cleanness, but after that it is sod in the grease of a Sow that giveth suck, it getteth that nitour and shining beauty, which we find to be in it.

Some mix the blood of Hogs with those medicines that they cast into Waters to take fishes, and the Hunters in some Countreys when they would take Wolves and Foxes, do make a train with a Hogs liver sod, cut in pieces and anointed over with honey, and so anointing their shoes with Swines grease, draw after them a dead Cat, which will cause the beast to follow after very speedily. The hair of Swine are used by Cobblers and Shoemakers, and also with them every Boy knoweth how to make their Hogs bleed. The dung is very sharp, and yet it is justly condemned by *Columella* for no use, no not to fatten the earth, and Vines also are burned therewithal, excepte they be diligently watered, or rest five years without stirring.

In *Plinius* time they studied to enlarge and make their Lettice grow broad, and not close together, *Theophrastus* which they did by slitting a little the stalk, and thrusting gently into it some Hogs dung. But for trees there is more especial use of it, for it is used to ripen fruit and make the trees more plentiful. The Pomegranates and Almonds are sweetened hereby, and the Nuts easily caused to fall out of the shell. Likewise, if Fennel be unfavoury, by laying to the root thereof either Hogs dung, or Pigeons dung, it may be cured; and when any Apple tree is affected and razed with Worms, by taking of Swines dung, mixed and made soft like mortar with the urine of a man layed unto the root, it is recovered, and the Wormes driven away: and if there be any rents or stripes visible upon trees, so as they are endangered to be lost thereby, they are cured by applying unto the stripes and wounds this dung of Swine.

When the Apple trees are loose, pour upon their roots the stale of Swine, and it shall establish and settle them, and wheresoever there are Swine kept, there it is not good to keep or lodge Horses, for their smell, breath, and voice, is hateful to all magnanimous and perfect spirited Horses. And thus much in this place concerning the use of the several parts of Swine, whereunto I may add our *English* experiments, that if Swine be suffered to come into Orchards, and dig up and about the roots of the Apple trees, keeping the ground bare under them, and open with their noses, the benefit that will arise thereby to your increase of fruit will be very inestimable. And here to save my self of a labor about our *English* Hogs, I will describe their usage out of *Mr. Tussers* husbandry, in his own words, as followeth: and first of all for their breeding in the Spring of the year he writeth in general;

*Let Lens will kept offend not thee,  
For March and April breeders be.*

And of September he writeth thus:

*To gather some mast it shall stand thee upon,  
With servants and children yet must be all gone.  
Some left among bushes shall pleasure thy Swine,  
For fear of a mischief keep Acornes fro kine.  
For rooting of pasture ring Hogs have need,  
With being well ringled, the better doth feed.  
Though young with their elders will lightly keep best,  
Yet spare not to ringle both great and the rest.*

*Toke seldom thy swine, while shee time doth last,  
For divers misfortunes that happen too fast,  
Or if you do fancy, whole eare of the Hog,  
Give ear to his neighbor, and ear to his Dog.  
Keep hog a while thee from meadow and Corne,  
For out aloud crying, that ere he was borne.  
Such lawlesse so bounding both often and long,  
If dog let him champing, he doth thee no wrong.*

And

And again in *Olibers* husbandry he writeth ;

*Though plenty of Acornes, the Porckings to fat  
Not taken in season may perill by that,  
If rattling or swelling get once in the throat,  
Thou ledest thy porckling a Crown to a Groat.*

In *November* he writeth again ;

*Let Hog once fat, lose none of that ;  
When mait is gone, Hog falleth anan,  
Still fat up some, till Shrovetide come,  
Now Porke and souce bears tacke in a house.*

Thus far of our *English* husbandry about Swine. Now followeth their diseases in particular.

### Of the diseases of Swine.

Pliny.  
Elianus.

**H**emlock is the bane of Panthers, Swine, Wolves, and all other beasts that live upon devouring of flesh, for the Hunters mix it with flesh, and so spread or cast the flesh so poisoned abroad in bits or morsels to be devoured by them. The root of the white Chamelion mixed with fried Barly flour. Water and oyl is also poyson to Swine. The black Ellebor worketh the same effect upon Horses, Oxen, and Swine, and therefore when the beasts do eat the white, they forbear the black with all wearisomeness. Likewise Henbane worketh many painful convulsions in their bellies ; therefore when they perceive that they have eaten thereof, they run to the waters and gather Snails or Sea-crabs, by vertue whereof they escape death, and are again restored to their health. The hearb Goosefoot is venomous to Swine, and also to Bees, and therefore they will never light upon it, or touch it. The black Night-shade is present destruction unto them, and they abstain from Harts tongue, and the great bur, by some certain instinct of nature. If they be bitten by any Serpents, Sea-crabs, or Snails, are the most present remedy that nature hath taught them. The Swine of *Scythia* by the relation of *Pliny* and *Aristotle* are not hurt with any poyson except Scorpions, and therefore so soon as ever they are stung by a Scorpion, they die if they drink. And thus much for the poyson of Swine. Against the cold (of which these beasts are most impatient) the best remedy is to make them warm sties, for if it be once taken, it will cleave faster to them, than any good thing, and the nature of this beast is, never to eat if once he feel himself sick, and therefore the diligent Master or keeper of Swine, must vigilantly regard the beginnings of their diseases, which cannot be more evidently demonstrated, then by forbearing of their meat.

### Of the Measels.

**T**he Measels are called in *Greek*, *Chalaza* ; in *Latin*, *Grandines* ; for that they are like hailstones spread in the flesh, and especially in the leaner part of a Hog, and this disease, as *Aristotle* writeth, is proper to this Beast, for no other in the world is troubled therewith : for this cause the *Grecians* call a Measly Hog, *Chalazur*, and it maketh their flesh very loose and soft. The *Germans* call this disease *Finnen*, and *Spanen* ; the *Italians*, *Gremme* ; the *French*, *Sarfume*, because the spots appear at the root of the tongue like white seeds, and therefore it is usual in the buying of Hogs in all Nations to pull out their tongue and look for the Measels, for if there appear but one upon his tongue, it is certain that all the whole body is infected. And yet the Butchers do all affirm that the cleanest hog of all, hath three of these, but they never hurt the swine or his flesh, and the Swine may be full of them, and yet none appear upon his tongue, but then his voice will be altered and not be as was wont.

These abound most of all in such Hogs as have fleshy legs and shoulders very moist, and if they be not over plentiful, they make the flesh the sweeter ; but if they abound, it tasteth like rock-fish or meat over-watered. If there be no appearance of these upon their tongue, then the chap-man or buyer pulleth off a bristle from the back, and if blood follow, it is certain that the beast is infected, and also such cannot well stand upon their hinder legs. Their tail is very round. For remedy hereof divers days before their killing, they put into their wash or swill some ashes, especially of Halse trees. But in *France* and *Germany* it is not lawful to sell such a Hog, and therefore the poor people do only eat them. Howbeit they cannot but engender evil humors and naughty blood in the body.

The roots of the bramble called *Ramme*, beaten to powder and cast into the holes, where Swine use to bath themselves, do keep them clear from many of these diseases, and for this cause also in ancient time they gave them Horse-flesh sodden, and Toads sodden in water, to drink the broth of them. The Bur pulled out of the earth without Iron, is good also for them, if it be stamped and put into milk, and so given them in their wash. They give their Hogs here in *England* red-lead, red-

oker,

Oker, and in some places, red loam or earth. And *Pliny* saith, that he or she which gathereth the aforelaid Burre, must say this charm :

*Hec est herba Argemon  
Quam Minerva reperit,  
Subis hic remedium  
Qui de illa gustaverint.*

At this day there is great praise of Maiden-hair for the recovery of Swine, also holy Thistle, and the root of *Ginsan* and Harts-tongue.

### Of leanness or pining.

**S**ometime the whole herd of Swine falleth into leanness, and so forsake their meat, yea although they be brought forth into the fields to feed, yet as if they were drunk or weary, they lie down and sleep all the day long. For cure whereof, they must be closely shut up into a warm place, and made to fast one whole day from meat and water, and then give them the roots of wilde Cucumber beaten to powder, and mixed with water, let them drink it, and afterward give them Beans pulse, or any dry meat to eat, and lastly warm water to procure vomit, as in men, whereby their stomachs are emptied of all things both good and bad : And this remedy is prescribed against all incertain diseases, the cause whereof cannot be discerned ; and some in such cases do cut off the tails, or their ears, for there is no other use of letting these beasts blood but in their veins.

### Of the Pektillence.

**T**hese beasts are also subject to the Pektillence, by reason of earth-quakes and sudden infections in the air, and in such affection the beast hath sometime certain bunches or swellings about the neck, then let them be separated ; and give them to drink in water the roots of *Dissidill* :

*Quatit agros tussit anela suis  
At faucibus angit obesus tempore pestis.*

Some give them Night-shade of the wood, which hath great stalks like cherry twigs, the leaves be eaten by them against all their hot diseases, and also burned snails, or Pepper-wort of the Garden, or *Lathura fetida* cut in pieces, sodden in water, and put into their meat.

### Of the Ague.

**I**n ancient time (*Varro* saith) that when a man bought a Hog, he covenanted with the seller, that it was free from sickness, from danger, that he might buy it lawfully, that it had no mange or Ague.

### The signs of an Ague in this beast are these.

**W**hen they stop suddenly, standing still, and turning their heads about, fall down as it were by a Megrim, then you must diligently mark their heads which way they turn them, that you may let them blood on the contrary ear, and likewise under their tail, some two fingers from their buttocks, where you shall finde a large vein fitted for that purpose, which first of all we must beat with a rod or piece of wood, that by the often striking it may be made to swell, and afterwards open the said vein with a knife : the blood being taken away, their tail must be bound up with Oiler or Elm twigs, and then the Swine must be kept in the house a day or two, being fed with Barly meal, and receiving warm water to drink as much as they will.

### Of the Cramp.

**W**hen Swine fall from a great heat into a sudden cold, which hapneth when in their travel they suddenly lie down through weariness, they fall to have the Cramp, by a painfull convulsion of their members, and the best remedy thereof, is for to drive them up and down, till they wax warm again, and as hot as they were before, and then let them be kept warm still, and cool at great leisure, as a horse doth by walking, otherwise they perish unrecoverably, like Calves which never live after they once have the Cramp.

## Of Lice.

They are many times so infested and annoyed with Lice, that their skin is eaten and gnawn through thereby; for remedy whereof, some annoynt them with a confection made of Cream, Butter, and a great deal of Salt: Others again annoynt them, after they have washed them all over with the Lees of wine, and in England commonly the Country people Staves-aker, red Oaker, and greafe.

## Of the Lethargy.

By reason that they are much given to sleep in the Summer time, they fall into Lethargies, and die of the same: the remedy whereof is, to keep them from sleep, and to wake them whensoever you finde them asleep.

## Of the head-aches.

This disease is called by the *Grecians*, *Scotomia*, and *Kraura*, and by *Albertus*, *Fractis*. Here with all Swine are many times infected, and their ears fall down, their eyes are also dejected, by reason of many cold humours gathered together in their heads, whereof they die in multitudes, as they do of the pestilence, and this sickness is fatal unto them, if they be not holpen within three or four dayes. The remedy whereof (if there be any at all) is to hold Wine to their nozles, first making them to smell thereof, and then rubbing it hard with it, and some give them also the roots of white Thistles, cut small and beaten into their meat, but if it fall out that in this pain they lose one of their eyes, it is a sign that the beast will die by, and by after, as *Pliny* and *Aristotle* write.

## Of the Gargarisme.

This disease is called by the *Latines*, *Rangado*, and by the *Grecians*, *Branchos*, which is a swelling about their chaps, joyned with Fever and Head-ache, spreading it self all over the throat, like as the Squinancy doth in a man, and many times it begetteth that also in the Swine, which may be known by the often moving of their feet, and when they die within three dayes, for the beast can be no more being so affected, and the disease creepeth by little and little to the Liver, which when it hath touched it, the beast dieth, because it putrieth as it passeth. For remedy hereof, give unto the beast those things which a man receiveth against the Squinancy, and also let him bleed in the root of his tongue, (I mean in the vein under the tongue) bathing his throat with a great deal of hot water mixed with Brimstone and Sale.

This disease in Hogs is not known from that which is called *Struma*, or the Kings evil at the first appearance, as *Aristotle* and *Pliny* write: the beginning of this disease is in the Almonds, or kernels of the throat, and it is caused through the corruption of water which they drink; for the cure whereof, they leech them blood as in the former disease, and they give them the Yarrow with the broadest leaves. There is a Hearb called *Herba impis*, all hoary, and outwardly it looketh like Rosemary, some say it is so called because no beast will touch it, this being beaten in pieces beaten with two tiles or stones, groweth marvellous hot, the juice thereof being mixed in milk and Wine, and so given unto the Swine to drinke, cureth them of this disease, and if they drinke it before they be affected therewith, they never fall into it, and the like is attributed to the hearb *Trinity*, and *Vale Maria*, likewise the blew flowers of Violets are commended for this purpose by *Discordius*.

## Of the Kernels.

These are little bunches rising in the throat, which are to be cured by letting blood in the shoulder, and unto this disease belongeth that which the *German* call *Rangen*, and the *Italians*, *Sidor*, which is not contagious, but very dangerous, for within two dayes the beast dieth thereof, if it be not prevented: This evil groweth in the lower part or chap of the Swine's mouth, where it doth not swell, but waxing white, hardeneth like a piece of horn, through pain whereof the beast cannot eat, for it is in the space betwixt the fore and the hinder teeth; the remedy is to open the Swine's mouth as wide as one can, by thrusting into it a round bat, then thrust a sharp needle through the same fore, and lifting it up from the gum, they cut it off with the sharp knife; and this remedy helpeth many if it be taken in time: Some give unto them the roots of *Asarabacca* and the Gentian to drinke, as a speciall medicine, which the *German* for that cause call *Rangens crute*: but the most sure way is the cutting it off: and like unto this there is such another growing in the upper chap of the mouth, and to be cured by the same remedy: the cause of both doth arise from being of their meat over hot, and therefore the good Swineheard must labour to avoid that mischief: The mischief of this is described by *Virgil*:

Hinc canibus blandie rabies venit, & quatit egros  
Tuffi: anabula fuer, eo faucibus argit abesse.

## Of the pain in their Lungs.

For all manner of pain in their Lungs, which come by the most part for want of drinke, are to have Lung-wort stamped and given them to drinke in water, or else to have it tyed under their tongues two or three dayes together, or that which is most probable, because it is dangerous to take it inwardly, to make a hole in the ear, and to thrust it into the same, tying it fast for falling out: and the same vertue hath the white Hellebor. But the diseases of the Lungs are not very dangerous, and therefore the Butchers say, that you shall seldom finde a Swine with found Lungs or Livers: sometimes it falleth out that in the Lights of this Beast there will be apparent certain white spots as big as half a Walnut, but without danger to the Beast, sometimes the Lights cleave to the ribs and sides of the Beast, for remedy whereof you must give them the same medicines, that you give unto Oxen in the same disease. Sometimes there appear certain blathers in the Liver of water, which are called water-gals; sometimes this is troubled with vomiting, and then it is good to give them in the morning, tryed pease mingled with dust of Ivory, and bruised Salt falling, before they go to their pastures.

## Of the diseases in the Spleen.

By reason that this is a devouring Beast, and through want of water, it is many times sick of the Spleen, for the cure whereof you must give them Prunes of *Tamarisk* pressed into water, to be drunk by them when they are a thirst; this disease cometh for the most part in the Summer, when they eat of sweet and green fruits, according to this verse;

*Strata jacent passim sua quaque sub arbore poma.*

The vertue of these Prunes of *Tamarisk* is also very profitable against the diseases of the Milt, and therefore it is to be given to Men as well as to Beasts, for if they do but drinke out of pots and cups made out of the wood of the tree *Tamarisk*, they are easily cleared from all diseases of the Spleen; and therefore in some Countries of this great tree they make Hog troughs and manger s, for the safeguard of their Beasts, and where they grow not great, they make pots and cups. And if a Hog do eat of this *Tamarisk* but nine dayes together, at his death he shall be found to be without a Spleen, (as *Marcellus* writeth.) When they become loofe in their bellies, which happeneth to them in the Spring time by eating of green Herbs, they either fall to be lean, or else to die. When they cannot easily make water, by reason of some stoppage, or harpness of Urine, they may be eased by giving unto them spurge-seed. And thus much for the diseases of Swine. For conclusion whereof I will add hereunto the length of a Swine's life, according to *Aristotle* and *Pliny*, if it be not cut off by sickness or violent death; for in their dayes they observed that Swine did live ordinarily to fifteen years, and some of them to twenty; And thus much for the nature of Swine in general.

## The medicines of the Hog.

The best remedy for the bitings of venomous Serpents is certainly believed to be this, to take *Actius*. Some little creatures, as Pigs, Cocks, Kids, or Lambs, and tear them in pieces, applying them whilst they are hot to the wound as soon as it is made, for they will not only expell away the poyson, but also make the wound both whole and sound. For the curing of Horses which are troubled with the inflammation of the Lungs; Take a sucking Pig and kill him neer unto the sick Horse, that you may instantly pour the blood thereof into his jawes, and it will prove a very quick and speedy remedy. The panck of a sucking Pig being taken out and mingled with the yolk which sticketh to the inner *Marcellus*. parts of the skin, and moistned both together, doth very much ease the pain of the teeth being poured into that ear, on which side the grief shall lie.

The liquor of Swines flesh being boyled, doth very much help against the *Buprestis*. The same is also a very good antidote against poyson, and very much helpeth those which are troubled with the Gowt. Cheese made of Cowes milk being very old; so that it can scarce be eaten for tartness, being in the liquor or decoction of Swines flesh which is old and salt, and afterwards thoroughly tempered, doth very much mollifie the stiffness of the joynts, being well applyed therunto.

The Indians use to wash the wounds of the Elephants which they have taken first with hot water, *Ælianus*, afterwards if they see them to be somewhat deep, they annoynt them with Butter: then do they assuage the inflammation thereof, by rubbing of Swines flesh upon them, being hot and moist with the fresh blood issuing from the same. For the healing of the wounds of Elephants, Butter is chiefly commended, for it doth easily expell the iron lyrage hid therein, and for the curing of the Ulcers, there is nothing comparable to the flesh of Swine. The blood of Swine is moist, and not very hot, being in temper most like unto mans blood, therefore whosoever saith that the blood of men is profitable for any disease, he may first approve the same in Swines blood: but if it shew not the same, it may in a manner shew the like action.





The ears of Dogs in the Summer time are exulcerated by flies, into the which fores it is good to infill liquid Pitch sod with Swines greafe, and this medicine also is good to deliver Beasts from the ticks, for they fall off as many as touch it. When Lambs or Kids are troubled with the Sheep pox, some use to anoint them with Swines greafe and the rust of Iron, that is two parts of Swines greafe, and one part of rust, and so warm them together. Also for the scabs upon the heels, that are called the scratches, which come for the most part in the Winter time, they cure them on this manner; They take the fat of Swine, and melt it on the fire, and pour it into cold water, which afterwards they take it out and beat it well together, at last they mingle it with Brimstone beaten small, and so anoint the place therewith three days together, and the third day they open the scabs, and so continue anointing till it be cured.

When a Horse cannot hold his Neck right, it is good to anoint him with Oyl, Wine, Hony, and Hogs greafe; the manner of some Leeches is, when they have made a suppuration by Cauterizing, they first of all wash it with stale Urine, and afterwards mingle an equal quantity of Pitch and Hogs greafe together, wherewithal they anoint and cure the sore.

Sometime the blood of Oxen falleth down into their feet, wherein it congealeth and breaketh forth into scabs, then must the place first of all be scraped with a knife, and the scabs cut away, afterwards with cloaths wet in Vinegar, Salt, and Oyl, moistened and pressed hard, and last of all by an equal quantity of Hogs greafe, and Goats sewer sod both together, it will be cured by laying it unto it. And thus much for the remedies of Swines greafe towards Beasts. The smokes of Beans being beaten small to powder, and mixed with Swines greafe, is very profitable against the pain of the hips and the nerves.

Some Physitians take the greafe of Swine, the fat of Geefe, the sewer of Buls, and the Oyle or sweat of Sheep, and anoint therewithal Gowty legs, but if the pain remove not, then do they add unto it Wax, Mirtle, Gum and Pitch, and some use it mixed with old Oyl, with the stone *Copaygi*, Cinck-foyl beaten in Wine with Lime or ashes. This Swines greafe beaten in water with Cumin, is prescribed by *Simeon Lebti* against the Gowt. It remediech the falling of the hair, and the pain in the heads of Women, mingled with one fourth part of gals, and the like virtue it hath with wilde Roses, *Lingulaea* and *Hippocampinus* with Nitre and Vinegar. When the corners of onts eyes are troubled with Worms, by anointing them with the fat of a Sow with Pig, beating them together both within and without, you shall draw all the Wormes out of his eyes.

When one hath pain in his ears whereby matter issueth forth, let him beat the oldest Lard he can in a Morter, and rake the juice thereof in fine wool, then let him put that wool into his ear, making it to work through warm water, and then infuse a little more of the juice of that Lard, and so shall he work a great cure in short time. And generally the fat of Geefe, Hens, Swine, and Foxes, are prepared for all the pains in the ears.

If there arise any bunch in the neck or throat, seethe Lard and Wine together, and so by gargaring that Liquor, it shall be dispersed, according to the Verses of *Serenus*;

— In rigore  
*Curvici gemini mulcibitur ungine populi,  
Hinc longam pariter nervos medicina sequetur.*

And it is no marvel that the vertue of this should go from the knees to the Nerves, seeing that *Pliny* affirmeth, that from the anointing of the knees the favour goeth into the stomach: there is so great affinity or operation of Rue upon the stones, that in ancient time they were wont to cure burnings by anointing the Cods with wilde Rue and Swines greafe.

Also this Greafe with rust of Iron, is good against all the imperfections in the seat. Butter, Goose greafe, and Hogs greafe, are indifferently used for this infirmity. Also this is used to keep Women from abortions that are subject thereunto, being applied like an eye salve. In the diseases of the Matrix, especially Ulcers, they first of all dip Spunges or Wool in warm water, and so cleanse the places infected, and afterwards cure it with Rozen and Swines greafe mingled together, and often using it in the day and night by way of Oymntment; but if the exulceration be vehement, after the washing they put Hony unto the former confection, and some make a perfume with Goats Horn, Gals, Swines greafe, and Gum of Cedars. And *Fernerius* saith, that Lard cut small and beat in a Morter of stone like paste, in a Limbeck of Glasse, rendereth a white water, which matcheth the hair yellow, and also the face comely. If a man be poysoned with Hemlock, he cannot avoid it better, then by drinking Salt, Wine, and fresh Greafe. A decoction hereof is good against the poyson of *Bouprestin*, and against Quicksilver. The sewer of a Sow fed with green Herbs, is profitable to them that are sick of a consumption of the Lungs, according to this Verse of *Serenus*;

*Proderit & veteris sevi pila sumpta suilli.*

This may also be given them in Wine, either raw or decocted, or else in pills to be swallowed down whole if it be not salted, and the silt day after they prescribe them to drink out of an Eggs-shell Liquid Pitch, binding their sides, breast, and shoulder bones very hard. It is also used for an old Cough after it is decocted, the weight of a Groat being put into three cups of Wine with some Hony. It is given also to them that have the flux, especially old Lard, Hony, and Wine, being beaten together

together till they be as thick as honey, wherof the quantity of a Hafil-nut, is to be drunk out of Water. Also for the scabs of Swines greafe, Butter, and Hony, being put down into a Horse throat, cureth him of an old Cough; and finally a piece of this Greafe being old, moistened in old Wine, is profitable to a Horse that hath been overheated in his journey. When Calves are troubled with belly Worms, take one part of Swines greafe; and mingle it with three parts of Hylop, afterwards shruet it down into the throats of the Calves, and it shall expell the Wormes.

When the tongue and chaps wax black by a peculiar sickness of the mouth, which the Physitians call *Mercuri Epidemius*, it is most wholesome to rub the tongue with the inner side of the rines of Bacon, and so draw out an extreme heat: and it is said if a man be deeply infected, whose tongue is thus rubbed; the said Bacon rine being eaten by any Dog, will procure his death. The fat of Wolves and the marrow of Swine is good to anoint bear-eyes withal. By swallowing down the marrow of Swine, the appetite to carnal copulation is encreased.

The ashes or powder of Hogs bristles which are taken out of Plasterers Pencils, wherewithal they rub wals, and mixed with Swines greafe, doth ease the pain of burnings, and also stayeth the bleeding of wounds and the falling down of the seat being first of all washed in Wine and dried Pitch mingled therewithal. The powder of the cheek-bones of Swine, is a most present remedy for broken bones, and also for ulcers in the legs and shins. The fat of a Boar is commended against Serpents, and so also is the liver of a Bore Pig when the Fibres are taken from it, if the weight of two pence be drunk in wine.

The brain of a Sow roasted at the fire, and laid to a Carbuncle, either dispersed or emptied it. Likewise the blood and brains of a Boar or a Sow, or Boar Pig being mixed with Hony, doth cure the Carbuncles in the yard, and the brains alone, openeth the gums of children, to let out their teeth, as *Serenus* writeth;

*Aut teneris cerebrum gingivae illine porci.*

There are naturally in the head of a Hog two little bones that have holes in them, one in the right part, and another in the left. Now if it happen that a man finde these bones by chance, either one or both of them, let him lay them up safe, and whensoever he is troubled with the Head-ach, let him use them, hanging them about his neck by a silken thread, that is to say, if the head ach on the right side, let him hang the right bone, and if on the left, the left bone: These things I report upon the credit of *Marcellus*. *Galen* also writeth, that if the pole of the Swines ear, be hanged about ones neck, it will preserve him from all Cough afterwards.

They were wont, as *Diocorides* writeth, to seethe a Gudgen in a Swines belly, by the eating whereof they stayed the falling down of the seat. If a man eat the lungs of a Boar, and a sow sudden and falling, they will preserve him from drunkennets all that day; and likewise the laid lungs doth keep the soles of the feet from inflammation which are caused by straight shoes. It also healeth the piles, clifts, and breaking of the skin, and kibes of the feet, by laying to it a Boars gall, and a Swines lungs.

If a Man drink the Liver of a Sow in Wine, it saveth his life from the bitings of venomous beasts. Also the liver of a Boar burned with Juniper-wood, cureth all the faults in the secrets; and drunk in Wine without Sale after it is sod, stayeth the looseness of the belly. The gall of Swine is not very vehement, for as the whole body is waterish, so also is that; neither is there any beast herein comparable unto it, (except the wilde) and that is enemy to Ulcers, ripening the sore, scattering the evil humors, and resisting the bitings of venomous Beasts. Also the gall of Boars layed to bruised Articles, doth procure unto them wonderful ease. One shall take away an old scurvie very easily by the gall of a Sow, which farrow if it be mingled with the juice of the hearb *Siclamine*, and therewithal to rub the head well in a Bath. To keep hair from growing upon the browes when it is once plucked off; Take the gall and fat of a Boar, and put them into a smooth thick earthen pot, and of the sharpest Vinegar and oyl of Almonds four ounces a piece, pour that into it, and then binde the mouth of the pot close with a thick linnen cloth, so letting them stand seven dayes together, afterwards open them again, and you shall finde upon the top a certain scum like gold, wherewithal anoint those places, which you would have remain bald, after that you have beaten it together in a morter: likewise the gall of a Barrow Hog or Boar Pig, doth scatter Apollumes and bunches in any part of the body. The gall of a Hog dried in an Oven, and laid upon a Carbuncle, as much as will cover it, it cleaveth fast to the sore, and draweth out the root and core thereof.

It is likewise good against the Ulcers of the ears, except the Ulcer be of long continuance, and then it is good to use a sharper gall, such as is a Sheeps, an Oxes, a Bears or a Goats, they mingle herewithal sometimes oyl of Roses; but for old wounds in the ears, it is good to take one part of beif Hony, and two parts of the sharpest Vinegar, and so let them boyll on the fire three walmes, afterwards let them far off from the fire, untill it leave seething or boyling, and then put Nitre unto it, so long till you know by the Vapor that the Nitre is settled, then seethe it again upon a gentle fire, so as it boyleth not over, and lastly put into this the gall of a Boar, or of a Goat, and then seethe it the third time, taking it from the fire, when it is luke-warm, infuse it into the ears, and this gal must not be the gall of a Sow, except of such as never bare Pig. Also this gall being dried doth



which are called *Monit*, which word by *St. Cyril* upon the Prophet *Hosea* is interpreted a wilde Ass, but I rather incline to their opinion which say, that *Chilnia*, *Monior*, and *Chaulidon* are Poetical words for cruell Boars. *Aristotle* is of opinion, these Boars being gelt when they are young, grow greater and more fierce, whereunto *Homer* also yeeldeth as he is thus translated :

*Nutrunt exutum sylvia torrentibus aprum  
Infer non bruti, sed dorsi montis opaci.*

But this is to be understood of such Boars, as by accident geld themselves by rubbing upon any tree. The French call this Beast, *Sangler* and *Porc Sanglier* ; the *Italiane*, *Cinghiale* and *Cinghiere*, and *Porc*. The *Spaniards*, *Puerco Sylvestre*, and *Puerco monter*, and *Javalis* ; the *German*, *Wild Schwein* ; the *Byzians* *Wepok* ; and the *Latins*, *Aper* ; for *Porcum* signifieth the tame Swine, and *Aper* the wilde. The reason of this *Latin* name *Aper*, is derived from *Aper*, because he liveth among the sharp thorns and woods ; but I rather think, that *Aper* is derived from *Caprus* the Greek word, or else *Aper* a *feritate*, from fierceness and wildenes, by changing one letter into another.

The Epithets.

The Epithets of this Beast are many, both in Greek and Latin, such as these are ; sharp, wilde, *Arcadian*, *Atalantean*, troubler, bloudy, toothed, hard, *Erymanthean*, cruell, outrageous, fierce, strong, gnashing, lightning, yellow, raging, Acorn-gatherer, quick, rough, rough-haired, horrible, *Menallan*, *Mylian*, *Meleagran*, threatening, woodwanderer, cruel, *Sabelican*, bristle-bearer, foaming, stink, filthy, *Tegean*, *Thufcan*, fearful, wry-faced, truculent, devourer, violent, *Umbrian*, wound-maker, impetuous, mountain-liver, armed on both sides, and such like.

But of these Epithets there are only three, *Erymanthean*, *Calydonian*, and *Mylian*, which do offer unto us peculiar stories, according as we finde them in the Poets, which we will prefix by way of moral discourse before we enter into the natural story of this beast. First of all, *Erymanthus* was a hill of *Arcadia*, wherein was a wilde Boar, that continually did descend down and depopulate their Corn-fields ; *Hercules* coming that way, and hearing of that mischief, did kill the said Boar, and carryed him upon his back to *Eurytheus*, whereat *Eurytheus* was so much afraid, that he went and hid himself in a brazen vessell, whereof *Virgil* speaketh thus :

*Placuit sylvam, & Lernam transfecere arcu.*

And of this *Erymanthean* Boar *Martial* speaketh ;

*Quantus erat Calydon, aut Erymanthe iuvus.*

Of the *Calydonian* Boar there is this story in *Homer* ; When *Oeneus* the Prince of *Ætolia* sacrificed the first fruits of his Countrey to the Gods, he forgot *Diana*, wherewithal she was very angry, and sent among the people a savage Boar, which destroyed both the Countrey and Inhabitants : against whom the *Calydonians* and *Pleuronians* went forth in hunting, and first of all that wounded the wilde Beast was *Meleager*, the son of *Oeneus* ; for reward whereof, he received his head and his skin, which he bestowed on *Atalanta* a Virgin of *Arcadia*, with whom he was in love, and which did accompany him in hunting : wherewithal the sons of *Thestius*, which were the *Ulexes* of *Meleager*, were greatly offended (for they were the brothers to his mother *Althea*) those men lay in wait to destroy him, whereof when he was advertised, he killed some of them, and put the residue to flight. For which cause the *Pleuronians* made war against the *Calydonians* : in the beginning of which war *Meleager* fell out with his Mother, because she did not help her Countrey. At last when the City was almost taken, by the persuasion of his wife *Cleopatra*, he went out to fight with his enemies, where in valiant manner he slew many of them, others he put to flight, who in their chase running away, fell down upon steep rocks and perished. Then *Althea* the mother of *Meleager*, began to rage against her son, and flung into the fire the torch which the Fates had given unto her to lengthen his dayes ; so when the law her son was dead, the repented and slew her self, and afterwards was cast into the very self same burning fire with him. In the hunting of this Boar *Aeneas* the companion of *Jason* to *Colchis* was slain. This Boar is also called a *Meleagran* and *Atalantean* Boar, of whom *Martial* writeth thus ;

*Qui Diomedem metuendum Setiger agrie  
Ætola occidit cuspide, talis erat.*

And again in another place ;

*Latte mero postum pigra mihi mortis alumnus  
Ponit, & Ætolo de jue dives erat.*

It is said that this Boar had teeth of a cubit long, and the manner of his hunting was expressed in the pinnacle of the Temple of *Tegra*, for which cause he is called the *Tegean* Boar. Upon the one side of the Boar against his middle, were painted *Atalanta*, *Meleager*, *Thestius*, *Telamon*, *Peleus*, *Peleus*, and *Iolaus* the companion of all *Hercules* travails. *Proetus* and *Gomeus*, the sons of *Thestius* and brothers

of *Althea*, on the other side of the Boar stood *Aeneas* wounded, and *Epichus* sustaining his hunting spear ; next unto him stood *Callor* and *Amphiaraw*, the son of *Oicleus*. After them *Hippobur*, the son of *Cereim*, *Agamedes* the son of *Stymphelus*, and lastly *Erythius*. The teeth of this Boar were taken away by *Augur*, after the time that he had overcome *Antibary* ; which he hung up in the Temple of *Bethsur*, standing in the Gardens of the Emperor. And thus much for the *Calydonian* Boar.

Now concerning the *Mylian* Boar, I finde this story recorded of him ; When *Adrasius* the *Phrygian*, who was of the Kings blood, had unawares killed his brother, he fled to *Sardinia*, and after his expiation dwelt with *Cresus*. It happened at that time that there was a wilde Boar came out of *Olimpus*, and waisted a great part of the Countrey of *Myfia* : the people oppressed with many losses, and terrified with the presence of such a Beast, besought the King to send his own Son *Atys* with much company to hunt and kill the Boar. The King was afraid thereof, because in his dream he saw a vision, his Son perishing by an iron spear ; yet at last he was persuaded, and committed the safeguard of his body to *Adrasius*. When they came to the wilde Beast, *Adrasius* bent his spear at the Boar, and while he cast it to kill him, the son of *Cresus* came betwixt them, and so was slain with the spear, according to the dream of his Father. *Adrasius* seeing this misfortune (that his hands which should have defended the young Prince, had taken away his life) fell into extreme passion and sorrow for the same, and although the King knowing his innocence, forgave him the fact, yet he slew himself at the Funeral of *Atys*, and so was burned with him in the same fire. And thus much for the *Mylian* Boar.

Now we will proceed to the particular story of the wilde Boar, and first of all of the Countries breeding Boars. The *Spaniards* say, that in the new found world, there are wilde Boares much lesse than ours, which have tails so short, that one would think they had been cut off, they differ also in their feet, for their hinder feet are not cloven, but stand upon one claw, and their forefeet are cloven like common Swines. Their flesh also is more sweet and wholesome then common Swines flesh, whereof *Peter Martyr* giveth reason in his *Ocean Decads*, because they feed under Palm trees, near the Sea-shore, and in Marshes.

*Olav Magnus* writeth, that in divers places of *Scandinavia*, they hunt wilde Boars which are twelve foot long. The wilde Boars of *India* according to *Pliny* have teeth, which in their compass contain a Cubit, and besides their teeth growing out of their chaps, they have two horns on their head like Calves horns. In the Islands *Medera*, there are abundance of wilde Boars, likewise in *Helvetia*, and especially in those parts that joyn upon the *Alps*, where they would much more abound, but that the Magistrates give liberty to every man to kill and destroy them. There are no Boars in *Africa*, except in *Ethiopia*, where their Boars have all horns, and of those it was that *Lycus* the Countryman saw in a publick spectacle at *Rome* ;

*Et niveos lepores, & non sine cornibus apros.*

that is, Hares white like Swine, and Boars that have horns. It is a wonderful thing that there are no Boars in *Creta*, and no lesse admirable that the Boars of *Macedonia* are dumb and have no voice : and thus much concerning the Countries of Boars.

Now concerning their Colour, it is observed, that wilde Boars for the most part are of a black and brown colour, especially at the top of their hair, and somewhat yellow underneath, and yet *Pliny* writeth, that he hath seen Boars all white ; howbeit that is not ordinary. Their blood is sharp and black like black wine, and such as will never be thick, their eyes like to the eyes of wrathful beasts, as Wolves and Lyons. Their tuskes are most admirable, for with them while they are alive, they cut like sharp knives ; but when they are dead, they have lost that cutting property, the reason of it is in the heat of the tooth, for it is certainly affirmed by Hunters of wilde Boars that when the Beast falleth first on the earth down before the Dogs and Hunters, if one pull off a bristle from his back, and lay it upon the tusks, the heat thereof will make it shrink up and turn together like a hot iron, and if Dogs do chance to touch them, they burn their hairs from their back, whereby the ardent and fiery nature of this beast is manifest, as an everlasting monument of the work of God, and yet notwithstanding all their wrath they have no gall, (*Aldus* writeth) their head and face are their strongest parts, and therefore upon them they receive the Hunters blowes as upon a buckler.

Their tears which they send forth of their eyes are very sweet, and of all other things they cannot abide their own urine, for it is thought to be so hot that it burneth them, and they can never run away in flight till they have emptied their bellies thereof. The places of their abode is for the most part in the Marshes and Woods : for the *Sythians* did hunt Hares and wilde Boars in the Marshes, but Roes and wilde Asse in the plain fields. Sometimes they hide themselves among Fern, which they have gathered together in the fields, and they dig holes and ditches for themselves, wherein they rest : And this is observed, that they love not so much to mallow in the mire, as the tame and domestical Swine, although they be of a hot and fiery nature. Their voice is like the voice of common Swine, but the females is somewhat more shrill. They live for the most part solitary and alone, and not in herds as the other do, and feed upon such meats as the vulgar Swine. *Tegras* saith, that there is a kinde of green Corn in *Garnany*, which is armed with very sharp stalks and points at both ends like Barley, this the people do see and eat like pease.

Now so far much as wilde Boars are destroyers of their Corn, they show that grain near the Woods

The places of their abode.







and legs asunder, even as a Dog will do some small bones; then he trod down the nets in disdain, passing by them that offered him the first encounter, and yet remembering his own vigor and strength, turning back again upon them, first overthrowing them, and grinding them betwixt his teeth like Apples, at length he meets with *Thrasylus*, and first teareth his cloth from his back, and then like wife tore his body in pieces, and this man I remember in the first place to be killed by this monster Boar, whether he was a beast or a man. *Martiall* in his book of spectacles remembereth a story of *Diana*, who killing of a wilde Sow with Pig, the young ones leaped out of her belly, and this I thought good to remember here, although it be somewhat out of place;

*Inter Casarea discrimina Sava Diana,  
Fixisset gravidam cum levis busta suam,  
Exiit parsus misera de vulnere matris,  
O Lucina feror, hoc peperisse sui?*

*Aeneas* the father of *Agamemnon* was killed by the *Calidian* Boar, as we have said already. *Carnus* was slain by a Boar in the mountain *Imolus*. There was one *Attes* a *Syrian*, and another an *Aedean*, and both these were slain by Boars, as *Plutarch* writeth in the life of *Sertorius*. It is reported of one *Attes* a *Phrygian*, that as he kept his Sheep he did continually sing songs in commendation of the mother of the Gods, for which cause the loved him, honoured him, and often appeared unto him; whereupon *Jupiter* fell to be offended, and therefore sent a Boar to kill *Attes*. *Kea* after his death lamented him, and caused him to be buried honourably. The *Phrygians* in his remembrance did every year in the spring time lament and bewail him.

*Adonis* also, the Leman of *Venus*, is fained of the Poets to be killed by a Boar: and yet *Macrobius* saith, that it is an allegory of the Sun and the Winter, for *Adonis* signifieth the Sun, and the Boar the Winter: for as the Boar is a rough and sharp beast, living in moyst cold, and places covered with frost, and doth properly live upon winter fruits, as Acorns, so he is the fitter emblem for Winter, that is, a devourer of the Sun's heat and warmth, both which fall away by death from all living creatures. When *Tenthus* a King of *Mysia* went to hunt in the mountain *Thrasylus*, he started a huge great Boar, which he and his guard followed and hunted unto the Temple of *Diana Orthia*, whereto the Boar entred for sanctuary.

The poor beast seeing the Hunters at hand, cryed out with the voice of a man: *Parete rem parate Deo*, O King spare *Dianus* Boar: But the King being nothing at all moved therewith, slew him in the Temple; which wickednesse the Goddes could not endure, and therefore first of all the restored the Boar to life, and afterwards afflicted the King with madnesse, who was therefore driven into the Mountains, and there lived like a beast.

When *Lysippe* his mother knew hereof, she went to him into the Woods, and carryed *Cremus* the Prophet, who instructed him to pacifie the Gods by a sacrifice of Oxen, which when it was performed, the King recovered again his right minde; and so his mother in remembrance thereof, built there a Chappell to *Diana*, and set thereupon the picture of a Boar in Gold, with a mans mouth. There was also a custome in ancient time for champions and their fathers brethren and kindred to swear by a Boar cut in pieces. And thus much for the naturall and morall story of the Boar, which I will conclude with those verses of *Horace*, describing the prodigious habitation of Boars in the waters, and *Dolphins* in the Woods, as if one had changed with another;

*Dolphinum sive appingis, fluctibus aprum,  
Qui variare cupit rem prodigialiter unum.*

#### The Medicines of the wilde Swine.

There are declared a M. things concerning the remedies of Goats, but a larger and more ample power shal be shewn of a wilde beast of the same kinde. Also the same regard shall be had concerning the remedies of a tame Sow and a wilde Boar, yea, of all other tame and wilde beasts, that is, that the same or things like to either of them may be ended, differing only according to more or lesse, because the same parts of wilde beasts living, are lesse moist and cold then those that are tame. That which we repeat here concerning the common remedies of a Boar and Sow, named, in some of the parts of them to wit, the blood, the brain, the cheek-bone, the lungs or lights, the liver, the gall, the ankle bone, the hoof, the dung, and urine, is not in the Sow repeated before.

The brains of a Boar taken with blood, is very much commended against the bitings of Serpents. Again, the brains and blood of a Boar, doth help those that fear the coming of Carbuncles. The lard and fat of a Boar being foddren and bound fast together, doth with a wonderful celerity make firm those bones that are broken. The fat of a Boar mingled with Hony and Rozin, is very much commended against the bitings of Serpents.

The fat of a wilde Boar mingled with the fat of the lungs or lights, doth very much profit those which have their feet broken or bruised by any mischance. The fat of a Boar being mixed with Oyl of Roses, is very good for those that are troubled with blisters or pushes, the parts anointed thereupon. The brains of a Boar is very profitable for Carbuncles, and the parts anointed thereon. The brains of a Boar being bruised very small in Hony, and put thereto, doth wonder-

wonderfully make it sound. The brains of a Boar foddren and drunk in wine, doth ease all the pains and griefs. There are more things spoken concerning the remedies of the brain in the medicines of the Sow. The ashes of the cheek-bone of a Boar doth cure those ulcers which do encrease bigger by little and little.

Also the same thing doth make firm those bones that are broken. The lungs or lights of a Boar mixed with hony, and put upon the feet after the manner of a mollifying emplaster, they shall be freed from all exulcerations: *Diaphanida* also doth commend the lungs or lights of Sows, Lambs, and Beasts: The liver of a Boar being new killed and scorched by a fire, and beaten to powder, and so being taken in wine, is an especiall remedy against the bitings of Serpents and Dogs. The liver of a Boar being old, and drunken in wine with Rue, is very much commended against the bitings of Serpents. The Fibres of the liver of a Boar, and those especially which are neere to the entrance of the gall and liver, being taken in Vinegar or rather wine, is much profitable against the bitings of Serpents.

The liver of a Boar is good to revive those whose spirits are drowsie. The liver of a Boar doth much profit, being stopp'd in the ears, for those that are troubled with Apoplexies or any running sores therein. The liver of a Boar being new killed and drunken in wine is very effectual against the footnesse of the belly. There are certain little stones in the liver of a Boar, as there is in a common or vulgar Sow, or at leastwise like unto little stones, and they are also white, which being foddren and taken in wine, are very effectual against the disease of the Stone. Thou shalt read many more things concerning the remedies of the liver of a Boar in the medicines of the Sow. The gall of a Boar is very much commended for Wennes or swellings in the neck.

The gall of a Boar being mingled with Rofin and Wax, doth cure those ulcers which do encrease bigger and bigger. The gall of a Boar, and Lambs milk, being mingled together, and dropped in the ears, is very profitable for all pains therein. The body of a man being anointed with the gall of a Boar, doth stirre him up to carnal copulation. The gall of a Boar being mingled with sewer and applied upon every joynt of the body, doth immediately cure all pains of the Gout. We have declared also many things in the medicines of the Sow, concerning the remedies of the gall of a Boar. The stones of a Boar being eaten is very good against the Falling sicknesse, or the stones of a Boar being taken in Mares milk or water, is also very effectual against the same disease. The hoof of a Boar being burned to ashes, and sprinkled upon drink, and so taken, doth very much help those that cannot easily make water.

The hooves of a Boar being burned and beaten to powder, and given in drink, is very effectual against the stopping of urine. The hooves of a Boar or Sow being burned, and given to drink in wine, is very much commended for those that cannot hold their urine in their sleep. The dung of a Sow (which liveth in the Woods) being dried and drunk in water and wine, doth stay the voiding of blood, and doth ease also old pains of the sides: And again being taken in Vinegar, it doth stay all ruptures and convulsions, and also being mingled with the syrup of Rofes, it doth remedy or help those places which are out of joynt.

The dung of a Boar being new made, and hot, is a speciall remedy against the flux of blood which issueth forth of the Nostrils. The dung of a Boar being mingled in wine, and applied after the form of an emplaster, do presently draw away and make sound any thing which cleaveth to the body. It being also bruised and foddren with hony, and afterwards kneaded like Dough, and so applied to the joynts, doth ease all pains that arise therein.

An emplaster made of the dung of a Boar, is very profitable against all venomous bitings, for it draweth forth the poyson. All other ulcers are filled up and cleansed with the dung of a Boar, except those which arise in the thighs: The dung of a Boar dried and beaten to powder, and sprinkled upon drink, doth cure all pains of the sides. Again, it being dried and beaten to powder, and admittred in wine, doth not only cure the pain in the Spleen, but also the pain in the kidneys. The dung of a Boar being burned to the ashes, and given to drink in wine, doth ease all pains in the knees and legs. The dung of a Boar new made and anoynted upon those places that are out of joynt, is very profitable for them. The dung of a field-boar mixed with brimstone, and taken in wine, and strained Pitch, is very commendable for pains in the hips. The dung of a Boar being mingled with wine, and afterwards strained, and given to drink, about the measure of two little cupfulls at a time, doth speedily help those which are troubled with the Sciatica.

It also being foddren in Vinegar and Hony, doth mitigate all pains that rise in the feet or ankles. The dung of a Boar burned to ashes, and sprinkled upon wine luke-warm, and so given to drink, doth help all those that are troubled with the bloody-flux. The rest of the remedies which concern the dung of a Boar, thou shalt find in the medicines of the Sow. The urine of a Boar mingled with Hony and water, and so taken, is a speciall remedy for those that are troubled with the Falling sicknesse.

Again, the urine of a Boar being taken in sweet Vinegar, doth drive out those things which are dried in the bladder. The urine of a Boar being kept in a glasse, doth cure all diseases and pains in the ears, but it is especially profitable for those which cannot hear. The urine of a Boar being kept in a glasse, and made luke-warm, and dropped into the ears, is a speciall remedy for all Apoplexies that are therein. The urine of a Boar which is kept long, is far more profitable, if so be that it be kept in a vessel of glasse. Again, the urine of a Boar being dried in smoak, and moistened with Hony, and so powred into the ears, doth cure the deafnesse of the ears.



beast, it is necessary that I should say something in this place, because that we finde in holy Scripture that it is one of the four Rivers which runneth through Paradise; which according to *Isaiah*, maketh many compasses and windings in the world, and at last faileth into the Red Sea; and they further say, that there is no River of the world that runneth so swiftly as this: And therefore *Isidorus* vocat, *sed est Sagitta, quod jaculum vel jaculum velocitate aequat*: That is, it is called a Tiger, a Dart, or Arrow, because it runneth as fast as an Arrow byeth: and for this cause we finde in *Tonolius*, that a River in *Sicilia* was called *Aler*, that is, *Spiculum*, a Dart.

104. that a River in *Scythia* was called *Astr*, that is, *Star*, or *Star*, from this Tiger the wilde beast, where-  
Some of the Poets do derive the name of the River *Tigris* from this Tiger the wilde beast, where-  
upon these Histories are told. They say, that when *Bacchus* was distracted, and put out of his  
wits by *Juno*, as he wandered to and fro in the world, he came to the River *Sylas* (which was the  
first name of this water) and being there desirous to pass over, but found no means to accomplish  
it, *Jupiter* in commiseration of his estate did send unto him a Tiger, who did willingly do him  
upon his back, and carry him over; Afterward *Bacchus* called that swift River by the name of  
that swift beast, *Tiger*. Others do report the tale thus. When *Dionysius* fell in love with the  
Nymph *Alphesibea*, whom by no means either by promises, intreaties or rewards he could allure  
unto him, at last he turned himself into a Tiger, and so oppressing the Nymph through force, he  
carry her over that River, and there begot upon her his son *Medus*, who when he came to age, re-  
membering the fact of his father and mother, called the name of the River *Tigris*, because of his  
Fathers transformation. But to leave this matter as not worth the standing upon, whether the Ri-  
ver was called after the name of the beast, or the beast after the name of the River, or rather both  
of them after the name of the dart or swift Arrow, we will proceed to the natural story of the Tig-  
ger, commending that to the Readers judgment which is essential to this story, containing in it no  
necessary learning, and garnished with all probability.

[illegible]

The *Indian* say, that a *Tiger* is bigger then the greatest *Lion*; and more fierce, than any of the *Beasts* that he calls his *neighbours*; they excel all other *Beasts*. There be some which have taken them for *Tigers*, which are called *Thoes*, greater then *Lyons*, and leffer then the *Indian Tigers*, as it were twice so big as *Lyons*; but I rather agree to the relation of *Arrabau*; *Strabo*, *Meagsthenes*, and *Mearius*; for they lay that *Tigers* feareth not an *Elephant*, and that one of them hath been seen to fly upon the head of an *Elephant*, and devour it: and that among the *Persians*, when four men led one of these *Tigers* camed by the way they met with a *Mule*, and that the *Tiger* took the *Mule* by the hinder leg, drawing him after him with his teeth, notwithstanding all the force of the *Mule* and his four leaders: which is unto me a sufficient argument not only of his strength, but of his nature also: and if any have been seen to kill a *Man*, they have been mistaken either for the *Linxes*, or for the *Thoes*.

The several parts, stature, they have been mistaken either for the Lynxes, or for the Rhinos. The similitude of the body of this beast is like to a Lionesses, for so is the face and the mouth; the lower part of the fore-head, and gnawing or grinning teeth, and all kinde of creatures which are ravening, are footed like a Cat, their neck short, and their skins full of spots, nor round like a Panther, nor yet divers coloured, but altogether of one colour and square, and sometimes long, as therefore this beast and the Panther are of singular note among all the four-footed: yet *Salus Seneca* seem to be of opinion that their spots are sometimes of divers colours, both yellow and black, and those long like rods in these sayings:

*Tibi dant varia pectora Tigres.*  
And again:  
*Ubera virgata fere Caspie.*  
And *Silius* saith:  
*Corpore virgato Tigris.*

**Oppianus.**

It were needless to speak of their crooked claws, their sharp teeth, and divided feet, their long tail, agility of body, and wildenes of nature which getteth all their food by hunting. It hath been falsely believed, that all Tigers be females, and that there are no males among them, and that they engender in copulation with the winde; whereupon Camerarius made this witty riddle in his rhetorical exercises:

*A fluvio dicor, fluvius vel dicitur ex me,  
Junctaq; sum vento, vento velocior ipso,  
Et mihi dat ventus natos, nec quaero maritos.*

### The Epithets

The Epithets of this beasts are these : *Armenian* Tigers, sharp, *Ganietlean*, *Hyrcanian*, fierce, cruel

cruel, and wicked, untamed, spotted, divers coloured, streaked, bitter, ravenous, *African*, greedy, *Caspian*, *Ceresean*, *Caucascan*, *Indian*, *Parthian*, *Marsian*, straight-footed, mad, stiff, fearful, strong, foaming, and violent, with many such others, as are easie to be found in every Author. The voice of this beast is called *Ranking*, according to this verse :

*Tigrides indomita rancant, rugiuntq; Leones.*

Now because that they are strangers in Europe, as we have said already, never breeding in that part of the world, and as seldom seen, we must be constrained to make but a short story of it, because there are not many divers things concerning the nature of it, and in the Physick none at all. For Their food, Oxen, Harts, and Sheep, but Hares and Conies they let alone.

It is reported by *Plutarch*, of a tame Tiger that was brought up with a Kid, the said Kid was killed and laid before him to eat, but he refused it two days together; and the third day oppressed with extremity of hunger, by her ranking and crying voice she made signs to her Keeper for other meat, who call unto her a cat, which presently it pulled in pieces and devoured it. The like story unto this we have shewed already in the Panther. Generally the nature of this beast is according to the Epithites of it, sharp, untamed, cruel, and ravenous, never so tamed, but sometimes they regress to their former natures; yet the *Indians* do every year give unto their King tamed Tigers and Panthers, and so it cometh to pass, that sometimes the Tiger kisseth his Keeper as *Seneca* writeth.

In the time of their lust they are very raging and furious, according to these Verses of *Virgil*

*Per sylvas tum saevus aper, tum pessima Tigris,  
Hæu male cum Libyæ solis erratur in agris.*

They ingender as Lions do, and therefore I marvel how the fable first came up, that they were all females & had no males among them, and that the females conceived with young by the West wind. We have shewed already in the story of the Dogs, that the *Indian Dog* is engendered of a Tiger and a Dog, and so also the *Hircanian Dogs*: Whereby it is apparent, that they do not only conceive among themselves, but also in a mingled race. The male is seldom taken, because at the sight of a man he runneth away, and leaveth the female alone with her young ones, for he hath no care of the whelps, and for this occasion I think that the fables first came up that there were no males among the Tigers. The female bringeth forth many at once like a Bitch, which the nourishment in her den very carefully, loving them, and defending them like a Lioness from the Hunters; whereby she is many times ensnared and taken. It is reported by *Strabo*, that when they hear the sound of Beis and Timbrels, they grow into such a rage and madnes, that they tear their own flesh from their backs.

Their copulation and generation.

For the taking of Tigers, the Indians near the River *Ganges* have a certain herb growing like Bupleurum, which they take and press the juice out of it, this they preserve beside them, and in still & quiet calm nights, they pour the same down at the mouth of the Tigers den, by vertue whereof it is said the Tigers are continually enclosed, not daring to come out over it through some secret opposition in nature, but famish and dye, howling in their caves through intolerable hunger. So great is the sweetness of this beast, as we have shewed already, that some have dreamed it was conceived by the wind. For as the swiftest Horses, and namely the Horses of *Dardania*, are likewise fabled to be begotten by the Northern wind, so the Tigers by the West wind.

The taking and killing of Tigers.  
Plutarch.  
Calisthenes.

Therefore they are never taken but in defence of their young ones, neither is there any beast that liveth upon prey so swift as they: *Solem Tigri India insuperabilem esse dicunt, quoniam fugendi celeritate, quae ventos aequat dicitur, et completis anspici.* Only the Tiger, the Indians say can never be conquered, because when he is hunted he runneth away out of sight as fast as the wind. For this cause they diligently seek out the caves and dens of the Tigers where their young ones are lodged, and then upon some swift Horses they take and carry them away: when the female Tiger returneth and findeth her den empty, in rage she followeth after them by the foot, whom she quickly overtaketh, by reason of her celerity.

The Hunter feeling her at hand, casteth down one of her Whelps: the distressed angry beall knowing that she can carry but one at once, first taketh up that in her mouth, without feeling upon the Hunter, contented with that one, returneth with it to her lodging; having laid it up safe; back again she returned like the wind to pursue the Hunter for the residue, who must likewise let her down another, if he have not got into his ship, for except the hunter be near the water side, and have a ship ready, she will fetch them all from him, one by one, or else it will cost him his life: therefore that enterprise is undertaken in vain upon the swiftest Horses in the world, except the waters come between the Hunter and the Tiger: And the manner of this beall is, when she seeth that her young ones are shipped away, and she for ever deprived of seeing or having them again, she maketh so great lamentation upon the Sea shore howling, braying and rancing, that many times they dyer in the same place, but if she recover all her young ones again from the Hunters, she departeth with unspeakable joy, without taking any revenge for their offered injury.

For





Whether there  
be any Uni-  
corns in the  
World.

and therefore the vulgar sort of Infidel people which scarcely believe any herb but such as they see in their own Gardens, or any beast but such as is in their own flocks; or any knowledge but such as is bred in their own brains, or any birds which have not intailed in their own nests, have never made question of these, but of the true Unicorn, whose existence there were more proofs in the world, because of the nobleness of his horn, they have ever been in doubt: by which distraction it appeareth unto me that there is some defect in the inward degenerate nature of man, whereby continually he blindeth the eyes of God his people, from beholding and believing the greatness of God his works.

But to the purpose, that there is such a beast, the Scripture is self witnesseth, for David thus speaketh in the 92. Psalm: *Et erigetur cornu meum tanquam Monoceros.* That is, my horn shall be lifted up like the horn of a Unicorn; whereupon all Divines that ever wrote, have not only collected that there is a Unicorn; but also affirm the similitude to be betwixt the Kingdom of David and the horn of the Unicorn; that as the horn of the Unicorn is wholesome to all beasts and creatures, so should the Kingdom of David be in the generation of Christ; And do we think the Scriptures would compare the virtue of his Kingdom, and the powerful redemption of the world unto a thing that is not, or is uncertain or fantastical, God forbid that ever any man should so despise the holy Ghost. For this cause also we read in *Suldas*, that good men which worship God and follow his laws are compared to Unicorns, whose greater parts as their whole bodies are unprofitable and untamable, yet their horn maketh them excellent: so in good men, although their fleshy parts be good for nothing, and fall down to the earth, yet their grace and piety exalteth their souls to the heavens.

The Hebrew  
names in Scri-  
pture prove  
Unicorns.

We have shewed already in the story of the Rhinocerot, that *Reem* in Hebrew signifieth a Unicorn, although *Muscher* be of another opinion, yet the Septuagints in the translation of Deut. 33. do translate it a Unicorn, for the Rhinocerot hath not one horn, but two. *Rabbi Salomon*, *David Kimhi*, and *Saadias* do always take *Reem* and *Karas* for a Unicorn, and they derive *Reem* from *Ram*, which signifieth *Altitudinem*, height, because the horn of the Unicorn is lifted up on high. Hereunto the *Arabians* agree, which call it *Barqron*; and the *Persians*, *Bark*; the *Chaldeans*, *Rama*. In the 39. of Job, the Lord speaketh in this manner to Job: *Nunquid acquisivi Unicornem in jure?* In the 39. of Job, the Lord speaketh in this manner to Job: *Nunquid acquisivi Unicornem in jure?* *Nunquid ligasti Monocerotem sicut Joo pro Jalo Javide;* *visit tibi, aut ut moreris juxta profectum tuum?* That is to say, will the Unicorn rest and serve thee, or tarry beside thy crutches? Canst thou binde the Unicorn with a halter to thy plough to make furrows, or will he make plain the clots of the Vallies? Likewise in the prophesie of Eza. the 34. chap. and in many other places of Scripture, whereby God himself must needs be traduced, if there be no Unicorn in the world.

The kindes of  
Unicorns.

Besides the *Arabians*, as *And Beldus* writeth, call this beast *Alberceden*, and say that it hath one horn in the fore-head which is good against poysons. The *Grecians* call it *Monoceros*, from whence *Pliny* and all the ancient *Grammarians* do call it *Monoceros*, yet the divines both elder and later do name it by a more learned proper *Latine* word *Unicornis*. The *Italians*, *Alicorni*, *Unicorni*, *Uicorni*, *Uicorni*, *Uicorni*, *Uicorni*; the *French*, *Uicorni*; the *Spaniards*, *Uicorni*; the *Germans*, *Einhorn*; and the *Italians*, *Gondoroceros*: And thus much for the name. All our European Authors which write of beasts, do make of the Unicorn divers kindes, especially *Pliny*, *Ludovicus Romanus*, *Pantius Venetus*, *Nicholas Venetus*, *Aeneas Sylvius*, *Albertus Magnus*, out of whose words we must gather the best description that we can of the Unicorn. The *Arsen Indians* (saith *Pliny*) do hunt a certain wilde beast which is very curst, untamable, having one horn, which in the head resembleth a Hart, in the feet and elephants, in the tail a Boar, and in the residue of the body a Horse; the horn he saith, is about two cubits long, and the voice like the lowing of an Ox, somewhat more shrill, and they deny that this beast is ever taken alive. *Belianus* writeth hereof in this manner, there are (saith he) certain Mountains in the midle of *India*, unto the which the passage is very difficult, where are abundance of wilde beasts, and among other Unicorns, which the *Indians* call *Cartaxomus*, who in their age are as big as a Horse, and their mane and hairs are yellow, excelling in the celerity of their feet and bodies, having feet cloven like an Elephants, the tail of a Boar, and one black horn growing out betwixt their eye-brows, not smooth, but rough all over with wrinkles, and the same groweth to a most sharp point, these things (saith *Belianus*) by comparing of whose words with *Pliny*, it is apparent they describe in these words but one and the same beast, and so also doth *Pliny* where by I gather, that it is no other beast then the wilde As, or at the least the wilde As cometh nearest to the Unicorn of all others, for they agree in these things; first, in that both of them have one horn in the middle of the fore-head; secondly, in that both of them are bred in *India*, thirdly, in that they are both about the bigness of a Horse; fourthly, in their celerity and solitary life; fifthly and lastly, in their exceeding strength and untamable natures; but herein they differ both in their feet and colours, for the feet of the wilde Asse are whole and not cloven like the Unicorns, and their colour white in their body, and purple on their head; and *Belianus* saith, that the horn also differeth in colour from the Unicorns, for the middle of it is only black, the root of it white, and the top of it purple, which *Belianus* doth interpret, that the superficies or upper face of the horn is all purple, the inner part white, and the inward part or middle black; but of this *Indian* wilde As we have spoken already, and therefore I will add nothing in this place but the words of *Belianus* in the life of *Apollonius*, who writeth in this manner;

There

There are many wilde Asse which are taken in the Fens, near the River *Hipfasis*, in whose fore-head there is one horn, wherewith they fight like Bulls, and the *Indians* of that horn make pots, affirming that whosoever drinketh in one of those pots, shall never take disease that day, and if they be wounded, shall feel no pain, or safely pass through the fire without burning, nor yet be poysoned in their drink, and therefore such cups are only in the possession of their Kings, neither is it lawful for any man except the King, to hunt that Beast, and therefore they say that *Apollonius* looked upon one of those Beasts, and considered his nature with singular admiration.

Now there was one *Damis* in his company, who asked him whether he did believe that the vulgar report of the Unicorns horns were true or no, *Apollonius* made this answer: *Adhibeo si Bujus regnum immortalen regem esse intellego, qui enim mihi aut aliter cuiquam poculum ita salubre potest dare, nunc versimile est ipsum quiddam illo vii. Et sic et coram frequentior vel ad crapulam usque bibere, nemo enim ut puto illum callumabiatur qui in talis poculo citius inebriatur.* That is to say, I would believe that report, if I found in this Countrey a King that were immortal and could never dye, for if a man would give me such a cup, or any other man, do not you think that I would believe he drunk in the same cup? and who would blame a man if he drunk in such a cup till he were drunk? for it were lawful to use that horn unto surfeiting: whereby we may gather the minde of that wise man concerning the Asse horn, and the Unicorns; namely, that they may give one some ease against accidental diseases, although they cannot prolong a mans life the space of one day: these things said be. There be Beasts (saith *Aristotle*) as the Oryx and *Indian* As, which are armed with one horn, and the cloven footed Oryx is no other then the whole footed As, for in the middle of their fore-head they have one horn, by which both sides of their head are armed, *Cum medium pariter commune utriusque extremi sit*, because the middle is equally distant from both the extremes; and the hoof of this Beast may well be said to be cloven and whole; because the horn is of the substance of the hoof, and the hoof of the substance of the horn, and therefore the horn is whole, and the hoof cloven; for the cleaving either of the horn or of the hoof cometh through the defect of nature, and therefore God hath given to Horses and Asse whole hoofs, because there is greatest use of their legs, but unto Unicorns a whole and entire horn, that as the ease of men is procured by the helps of Horses, so the health of them is procured by the horn of the Unicorn. These things (saith *Aristotle*.) And *Strabo* also writeth, that there are Horses in *India*, which have Harts heads, with one horn; of which horn their Princes make cups, out of which they drink their drink against poyson; and therefore by this which hath been said it appeareth unto me, that either the *Indian* As is a Unicorn, or differeth from it only in colour; and the objection of the hoofs is answered by *Aristotle*. Unto this discourse I will add the travails of *Ludovicus Raiman*, wherein he saw two Unicorns at *Mecca* in *Arabia*, where *Mahomet's* Temple and Sepulcher is. There are preserved (saith he) within the walls and Cloysters of that Temple two Unicorns, which by way of miracle they bring forth to the people, and truly nor without cause, for the sight is worthy admiration.

The use of a  
Unicorns horn.

Now their description is on this sort: One of them and the elder was about the stature of a Colt of two years and a half old, having a horn growing out of his fore-head of two cubits length, and the other was much less, for it was but a year old, and like a Colt of that age, whose horn was some four spans long, or thereabouts. The colour of them was like a Weasle coloured Horse, the head like the head of a Hart, the neck not long, and the mane growing all on one side. The legs slender and lean, like the legs of a Hind, the hoofs of the fore-feet were cloven like a Goats feet, and the hinder-legs are all hairy and shaggy with the outsize; the Beasts although they were wilde, yet by Art or superstition; they seemed to be tempered with no great wildenes; it was said that the King of *Ethiopia*, did send them to the Sultan of *Mecca*; with whom he is constrained to observe perpetual amity. Now these Unicorns are of another kinde, then the Unicorns of *Pliny* and *Belianus*, because their Unicorn hath a whole hoof, and this cloven, but this objection was answered before; and although *Pliny* and *Aristotle* do acknowledge no other Unicorn then the Oryx, whose horn is black, as hard as Iron, and sharp at the point, yet it is clear that there is another Unicorn beside that.

Now *Pantius Venetus* saith, that in the Kingdom of *Bafman*, which is subject to the great *Chan*, that there are Unicorns somewhat lesser then Elephants, having hair like Oxen, heads like Boars, feet like Elephants, one horn in the middle of their fore-heads, and a sharp thorny tongue, wherewith they destroy both man and beast; and besides he addeth, that they muddle in the dirt like Swine. Now if it were not for the horn in the middle of the fore-head, I would take this Beast for a Rhinocerot, but because the horn of the Rhinocerot groweth out of the nose, I deem this to be a second kinde of Unicorn; for there is no man that shall read this story, but will think that the learned Author had reason to discern betwixt the eyes and the fore-head, and therefore there can be no exception taken to my observation.

*Nicholas Venetus* an Earl saith, that in *Masum* or *Serica*, that is, the Mountains betwixt *India* and *Celbey*, (as *Aeneas Sylvius* writeth) there is a certain Beast having a Swines head, an Oxes tail, the body of an Elephant (whom it doth not only equal in stature, but also it liveth in continual variance with them) and one horn in the fore-head: now this if the Reader shall think it different from the former, I do make the third kinde of the Unicorn; and I trust that there is no wise man that will be offended at it: for as we have shewed already in many stories, that sundry Beasts have not only their divisions, but sub-divisions, into sub-alternal kindes, as many Dogs, many Deer,

B b b

many





sweet, nor either abolished by age, nor the vertue thereof diminished by often or frequent cups. For rich men do usually cast little pieces of this horn in their drinking cups, either for the preventing or curing of some certain disease. There are also some which inclose it in gold or silver, and so cast it in their drink, as though the force thereof could remain many years, notwithstanding the continual soaking in Wine.

But that which is so used and drunk in Wine doth bring upon it a certain dark or obscure colour, the whiteness which before remained upon the same being quite lost, expelled and utterly abolished. Most men for the remedies arising from the same, command to use the horn simply by it self: Others prefer the marrow therein. It being cast in Wine doth boil, which some men either through ignorance or deceit, impute to be a sign of the true horn, when as contrarily any other horns being burnt, do in water or wine cause bubbles to arise. There are some wicked persons which do make a mingle mangle thereof, as I saw amongst the *Venitians*, (being as I hear say, compounded with lime and sope) or peradventure with earth or some stone: (which things are wont to make bubbles arise) and afterward sell it for the Unicorns horn.

Wherefore it shall be more safe to buy it out of the whole horn if it may be done, or of greater crums, and which may well describe the figure of a horn, then small fragments where you may receive less deceit. A certain Apothecary which was at *Nuremberg*, in a stately mart Town amongst the *Germans*, declared the way unto me how to deface the colour of an adulterated Unicorn horn, as being made by some with Ivory, either macerated or boiled with certain medicines (by Set-off as I suppose, and other things) by which means having scraped it, I found within the true substance to be Ivory. *Antonius Brasavolus* writeth, that all men for the most part do sell a certain stone for Unicorns horn: which truly I deny not to be done, who have no certainty therein my self: notwithstanding also it may to come pass, that a very hard and solid horn, about the point of a sword especially (which part is preferred to inferior, as also in Harts horns) to which either stones or iron may yield, such as Authors attribute to the Rhinoceros. And other Unicorns may bear the shape of a stone before it self. For if *Opheus* concerning Harts horns rightly doubted, whether the same or stones were of greatest strength: I think it more to be doubted in the kinde of Unicorns, for the horns of Harts are not only solid (as *Aristotle* supposed) but also the horns of Unicorns, as here I have said.

The horn of an Unicorn is at this day used, although age or longinquity of time hath quite abolished it from the nature of a horn. There are some which mingle the Rhinoceros with the Unicorn, for that which is named the Rhinoceros horn, is at this day in Physical use, of which notwithstanding the Authors have declared no effectual force. Some say that the Unicorns horn doth sweat, having any poysion coming over it, which is false, it doth perhaps sometimes sweat, even as some solid, hard, and light substance, (as also stones and glaſs) some external vapour being about them, but this doth nothing appertain to poysion.

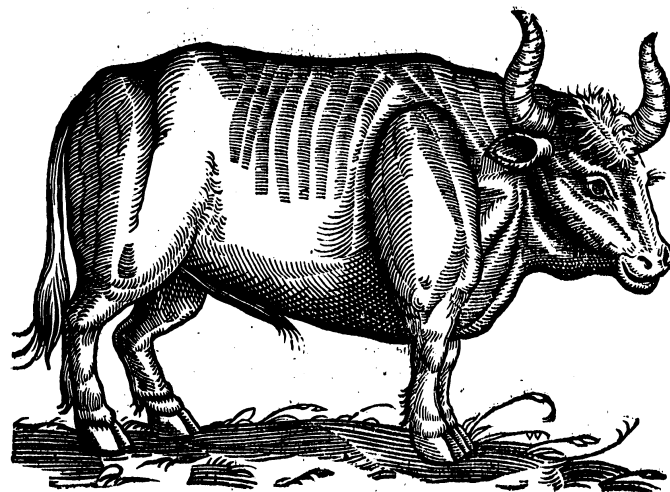
It is in like manner reported, that a kinde of stone called the Serpents tongue doth sweet having poysion come over it. I have heard and read in a certain book written with ones hands, that the true horn of a Unicorn is to be proved in this manner. To give to two Pigeons poysion (red Arſnick or Orpin) the one which drinketh a little of the true Unicorns horn will be healed, the other will die, I do leave this manner of trial unto rich men. For the price of that which is true, is reported at this day to be of no less value then gold. Some do sell the weight thereof for a shilling, or eight pence: some for a crown, or twelve pence. But the marrow thereof is certainly of a greater price, then that which is of harder substance. Some likewise do sell a dram thereof, for two pence half penny. so great is the diversity thereof. For experience of the Unicorns horns to know whether it be right or not: put silk upon a burning coal, and upon the silk the aforesaid horn, and if so be that it be true the silk will not be a whit consumed.

The horns of Unicorns, especially that which is brought from new Islands, being beaten and drunk in water, doth wonderfully help against poysion: as of late experience doth manifest unto us, a man, who having taken poysion & beginning to swell was preserved by this remedy. I my self have heard of a man worthy to be believed, that having eaten a poysioned cherry, and perceiving his belly to swell, he cured himself by the marrow of this horn being drunk in Wine, in very short space.

The same is also praised at this day for the curing of the Falling sickness, and affirmed by *Ellanus*, who called this disease curled. The ancient Writers did attribute the force of healing to cups made of this horn, Wine being drunk out of them: but because we cannot have cups, we drink the substance of the horn, either by it self or with other medicines. I happily sometime made this Sugar of the horn, as they call it, mingling with the same Amber, Ivory dust, leaves of gold, coral, & certain other things, the horn being included in silk, and beaten in the decoction of Raisins and Cinamon. I cast them in water, the rest of the reason of healing in the mean time not being neglected. It is moreover commended of Physicians of our time against the pestilent fever, (as *Alsius Rhodanus* writeth) against the bitings of ravenous Dogs, and the strokes or poysion some things of other creatures: and privately in rich mens houses against the belly or maw worms: to conclude, it is given against all poysion whatsoever, as also against many most grievous diseases. The King of the *Indians* drinking out of a cup made of an *Indian* Unicorns horn, and being asked wherefore he did it, whether it were for the love of drunkennes, made answer, that by that drink drunkennes was both expelled and resisted, and worse things cured, meaning that it clean abolished all poysion whatsoever. The horn of a Unicorn, doth heal that detestable disease in men called *S. Johns* evil, otherwise the curled

curled disease. The horn of an Unicorn being beaten and boiled in Wine, hath a wonderful effect in making the teeth white or clear, the mouth being well cleansed therewith. And thus much shall suffice for the medicines and vertues arising from the Unicorn.

## Of the URE-OX.



This beast is called by the *Latines*, *Urus*; by the *Germans*, *Aurox*, and *Urox*, and *Großwiesent*; by the *Theveral* the *Lithuani*, *Thur*; the *Seythians*, *Bubri*; and these beasts were not known to the *Grecians*, names, (as *Pliny* writeth) of whom *Seneca* writeth in this manner;

*Tibi dant varia pectora Tigres,  
Tibi villosi terga Biontes,  
Latissq; feri cornibus urī.*

And *Virgil* also maketh mention of them in his *Georgicks*, writing of the culture or tilling of Vines.

*Tenenda saepe etiam & pecora omnis tenendum:  
Præcipuum frons tenera, imprudensq; loborum,  
Cui super indignis hyemes, solentq; potentes,*

*Silvestres urī assidue, capreaq; sequaces  
Illudunt.*

These wilde beasts or Ure-oxes are wilde Oxen, differing from all other kindes, already rehearsed in the story of Oxen, Bugles, Bisons, or any other, although some have unskillfully taken them for Bisons, and *Sir Thomas Eliot* in his Dictionary, doth English *Urus* a Bugle, but beside him no body, that I know, and for this cause he is reprehended by other. Now although there be nothing in this beast but ordinary, yet seeing it is a creature so well known, we have less reason to omit his shape and story, lest we should justly be condemned of negligence and carelessness.

In outward proportion of the body it differeth little from the Bull, It is very thick, and his back somewhat bunched up, and his length from the head to the tail is short, no ways answerable to the proportion of his stature and sides: the horns (as some say) are but short, yet black, broad, and thick, his eyes red, a broad mouth, and a great broad head, his temples hairy, a beard upon his chin, but short, and the colour thereof black; his other parts, as namely in the face, sides, legs, and tail, of a reddish colour.

These are in the wood *Hergyna*, in the *Pyrry* Mountains, and in *Mazovia*, near *Lingnia*, Places of their abode. They are call'd *Uri* of *Orin*, that is the Mountains, because their savage wildness is so great, they seldom descend from those safeguards. They far excel Bulls, and other wilde Oxen, coming nearer to the quantity or stature of Elephants, then to the Bull. In resemblance a man would think them to be compounded of a Mule and a Hart, for their outward resemblance so seem, it is said they could never be taken by men, although they were taken when they were young.

Countrys  
of their breed.

young, yet they love other herds of Cattel, and will not forsake them easily after they have once joyned themselves unto them, whereby many times they are deceived and killed, twenty, thirty, or forty at a time. *Caligula Caesar* brought of these alive to *Rome*, and did shew them in publick spectacle to the people, and at that time they were taken for wilde Bulls. Some affirm that there are of these in *Prussia*, and that they are so wilde, cruel, and untamable, as they fear or spare neither man nor beast; and when they are set upon and wounded by the Hunters in the Woods among the trees, feeling their hurts, and perceiving their blood issuing out of their body, they rage above measure; for having no means to take revenge upon the Hunter, by reason that he standeth behinde some great tree, for very wrath and fury they kill themselves with their own head-long force upon the same tree. It is said that their foreheads are so broad and large, that two men may easily sit betwixt their horns. They are able to take up an armed man and his Horse, and to toss him into the air like a Bull, and the heads of these or such like beasts are to be seen publickly fixed up in common places at *Matiz* and *Wormes*, which are worth the observation, because in all proportion they are twice so big as the vulgar Bull or Oxe.

Now although their large bodies and manes do also appertain to the Bisons, yet it is not unfit to attribute the same also to the Ure-oxe. For if it be in the pleasure of any man to make it also a kinde of Bison, I will not deny that this must be remembered, that both the body of this beast is much larger, and also the aspect not so grim or fierce as is the Bison.

Their stature.

There are many of these found also in *Angemania*, and the Confinnes of *Lepponia*; and other Northern parts of the world, where they are called by the *Thyrian* term *Zabronet*, and these are so high as a tall man can hardly lay his hand upon the top of their backs, although he strain himself very much.

And some of them are fifteen cubits in length, of whom, beside their admirable strength, their velocity and nimbleness is also remarkable; for it is said of them, that when they empty their bellies, they can turn about to take their dung or excrement upon their horns before it fall to the ground, which they cast upon the Hunters or pursuers. Dogs or men, whereby they blinde and burn them. They which accustom or practise to kill and hunt these beasts, are greatly commended and rewarded when they have killed many of them, whereof they make proof, by bringing the horns of them that they have killed into the common Market-place.

In ancient time before the invention of Iron weapons, they did take them in those Countrys in ditches, and great caves of the earth, whereunto the strongest and most active young men did apply themselves, having both Dogs and all other needfull instruments to take away the life of this beast; and if it did not happen that he fastned his horns into some tree, then was all their labour lost, for they could never come neer to touch him, only when in his speedy swift fury among the woods, he ran his horns into the body of some Oaks or such like, whereby he was stayed, (for it is not so easie to pull them forth as to fixe them, because they are rugged, crooked, and stand upward) then he was overtaken and killed by some Hunter or other. And if at any time he met with a Hunter, it was fatal and deadly to the man, except he could avoid the beast by getting unto some tree.

*Sigismundus Baro*, that honourable man writeth thus hereof, that in *Malonia* near *Litania*, it is bred, and called *Thur*, and they are a kinde of wilde Oxe, not differing from the vulgar, (except as aforesaid) but in their colour, and a spotted strake or line which goeth all along their backs. And those Ure-oxen are kept as it were in Parks and Chafes, having a peculiar deligment by the King, and the inhabitants of certain Villages to keep and watch them. Sometimes when they meet with a common or vulgar tame Cow, they leap upon her, and fill her; but such a Calf liveth not long, but dyeth as if it were not perfect, and if it do chance to live, it never resembleth the sire, nor yet is admitted into their society and herd, but are refused for bastards and ignoble breed. And when he was Ambassador to *Sigismundus* the Emperour he received for a gift one of these killed, and bowelled, having the skin of the forehead cut off and taken away, whereat he wondered much but durst not ask the question or reason thereof; yet afterward he understood that there were girdles made of that part of the hide, whereby the women in that Country were persuaded that they should be made apt to conceive and bring forth children: and *Bona* the mother of *Sigismundus* gave unto him two girdles for that purpose, whereof he said he bestowed one upon the Queen of *Romans*, who did take the same at his hand very graciously and thankfully. And it is certain, that out of the hides of these beasts are made girdles, which are two fingers thick, and strong and yet the hair upon them is soft and gentle like any Wool.

The flesh of these beasts is rank and heavy, and if it be eaten fresh it causeth loosenesse, but if it be salted a day or two it is nothing inferior to Beef, for so the humidity is taken away. With the horns are made drinking Cups, and for that purpose the richer sort of people do edge up them over with silver and gold: they hold or contain as much as two ordinary Pitchers of water. Other take off the points and fasten them to spears, being very sharp, and not easily blunted or broken, and other make of them cut into slices or panes the best Lanthorns in the World. And thus much for the Ure-ox, unto whose History it is needfull for me to adde the story of divers other wilde Oxen not yet described.

Histories of  
other wilde  
Oxen.

*Strabo* saith, that there are Oxen called *Rhizes*, among the *Hesperian Ethiopians*, who in outward proportion are much like the vulgar Bulls, but in other parts, as quantity, strength, and vigour, comparable to the Elephants.

Toumils

*Thucydides* writeth, that betwixt *Florida* and *Palme*, in the new found World, there are very many strange shaped beasts, and among other a kinde of wilde Bull, whose horns are a foot long, but on his back he hath a tumour or bunch like a Camel, and is therefore called *Bar Camella*, his hair all over his body is very long, but especially under his chin, and his colour like a yellow Mule, and this beast is a continual enemy to a Horse. Like unto these are the tame *Seythian* Oxen, and some other in *Asia*, who carry pack upon the bunches of their backs, and also bend their knees like Camels.

### Of the Lybian O X E.

There is so great an innumbrable of Lybian Oxen, of so great swiftnesse and celerity, that the Hunters are many times deceived in hunting them, and so do certainly chance or fall upon other wilde beasts for the same they raised, and herein the mean while doth hide himself in a place of brambles and briars, keeping himself there safe, while other wilde beasts doth appear like unto them, and so do deceive the eyes of the Hunters: therefore if any man do begin to follow after either of them, it will be but labour lost, for he is not able to comprehend or attain them with a Horse, except he may take them being wearied by longitude of time. But if any Hunters shall finde a young Calf, spare the life thereof, and shall not presently kill it, he shall reap a double profit by it; and first it doth bring profit to it self, and doth induce or lead his Dam into captivity. For after that the Hunter hath bound the Calf with a rope, the being inflamed by the love or affection which she beareth to her Calf, returneth back again unto it, coveting with an ardent desire to loosen and take away her Calf out of the bond or halter, therefore she thrusteth in her horn into the may loosen the cord, and pluck her young one away, whereby she is kept fast bound with her Calf, her horns being intangled in the rope. Then cometh the Hunter and killeth her, and taketh forth her liver, and also cutteth off her dugs or udder, and doth likewise pluck off her skin, and leaveth her flesh for the Birds and wilde Beasts to feed upon. There is another kinde of Ox in *Lybia*, whose horns do bend downward, and for that cause they are said to feed going backward. Of the sayings of *Herodotus* and *Strabo*, I have spoken before. *Philus* doth write, that they are called Oxen going backward, because the broadness of their horns doth cover their eyesight, so that it standeth them in no use to go forward, but is very commodious to go backward. There is an Ox which liveth in the Woods of *Africa*, which doth resemble a domestical Ox, yet lesse in stature, of a browner rustier colour, and also most swift of foot. This beast is found in the deserts, or in the Marches or limits of the deserts. Their flesh is also of a perfect or absolute favour and use, good for the nourishment of men.

### Of the Indian wilde O X E N.

The horns of the Oxen of the *Garamantens* do grow downwards toward the earth, and therefore when they feed they bow the hinder part of the neck, (as *Solinus* writeth) and as we have spoken before in the diversities of wilde Oxen. The Woods also in *India* are filled with wilde Oxen. In the Province of *India* where the *Gymnis* inhabit, are great multitudes of Oxen which live in the Forrests or Woods. In the Kingdoms which are upon the borders or confines of *India*, (in the mid of the day) are many fair and great Oxen which live in the Woods. There are Mountains in the inmost Regions of *India*, which are very hard to come unto, where they say live those beasts wilde, which are among us domestical and tame, as Sheep, Goats, Oxen, and so forth. The great King of *India* doth elect or choose a day every year for the runnings and combats of men, and also fightings of Beasts; who setting their horns one against another, do fight itfully with admirable rage, until they overcome their adversaries. They do also labour, and strive with all their nerves and sinewes, even as if they were Champions, or fought for some great reward, or should get honour by their battell.

Wilde Bulls, tame Rams, Asses with one horn, Hyenae, and lastly Elephants, as if they were capable of reason, they wound them among themselves, and the one doth oftentimes overcome and kill the other, and sometimes fall down together being both wounded. I have also recited before in another place of the intreaty of Oxen, those Indian Oxen which are said to be most swift in their joynts in running to and fro, when they are at combat, because there we had not distinguished whether these were wilde Oxen or not: but it doth appear in this place, that they are wholly taken for wilde Oxen: and the thing it self doth manifest that domestical Oxen are not so swift nor so strong.

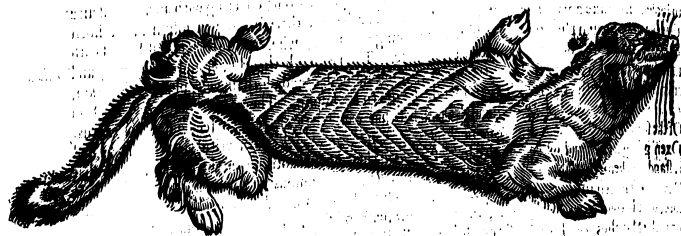
The Oxen in *India* have altogether whole hoofs, and also but one horn. *Ethiopia* also doth breed Indian Oxen, that is to say, Oxen that are like to those of *India*, for some have but one horn, and other some three. *Solinus* saith, that there are found in *India* some Oxen which have but one horn, and other some which have three horns, with whole hoofs and not cloven. The Indian Oxen are said to be as high as a Camel, and their horn four foot broad. *Ptolemy* doth report, that he saw a horn of an Indian Oxe which did hold in the breadth of it thirty gallons.



*Aristotle.*

There are also Oxen which are bred in *India* which in greatnesse are no bigger then a Buck, or Goat, they do run yoked together very swift, nor do end their race with lesse speed then the Goat, land Horses, and I did not take them to be Oxen living in the Woods; for your Rangler and I have seen Oxen which live in the Woods, are the swiftest of all beasts in this kinde, and most apt to combat with one another, and they may partly be called Oxen having one horn, and partly Oxen having three horns: neither are they found in *Scandinavia*, but also in other Regions and Dominions of *Asia*, as we beleave that *Indian* Oxen are of the same kinde. *Solinus* doth not rightly call those *Indian* Oxen, which *Ælian* calleth *Æthiopicos*, as I have declared above in the story of the *Æthiopian* Oxen, for their horns are moveable. *Clephas* doth write, that there are sprung up among the Oxen, that beast which is called *Manitiora*: which is manifested by *Aristotle* in his History of Four-footed beasts. *Hermolam* also and others have not considered this error. Among the *Arabians* there are Oxen which live in the Woods, which do differ from those that are bred in the City, as much as wilde Swine from tame. Their colour is black, bending a little downwards, and their horns broad and upright. There is a City in *India* called *Arachota*, taking the name from the River *Arachota*, which doth flow out of *Candoues*: what those beasts are which do bend their horns upward, I have declared in the story of the *Bison*; for as there may be spoken something concerning the difference of the Plants of the Woods, so also concerning the beasts that are bred in the City, and those that are bred in the Woods.

Of the *WEASEL*.



There are divers kindes of Weasels, but in this place we do intreat of the least kinde, whose form and shape we have also here set down. It is likewise properly named the *Laineux Mustela*, a Weasel; for so we were wont plainly to name those which were common and domestical, and to adde names to those which are more feldsome seen, or live in the Woods for difference sake.

The word *Chold* in Levit. 11. is translated a Weasel of all Interpreters. The *Rabbins* do call them *Chuldab*, and commonly *Musfela*, as *David Kimhi* writeth. The *Chaldeans* do translate it *Chuldab*, the *Arabs* *Gaidab*, the *Persians* *Gurba*, and *Hieron* *Musfela*. *Oach* is an Hebrew word, wherupon it was once called *Ochim*, plurally in *Idai*. 13. *Babylon subvertetur; & implebitur domus eorum Ochim, Musferus ceropithecus verit*. That is to say, *Babylon shall be overthrowen, and their houses full of Ochim*, that is, *Weasels*, but *Musferus* doth call them *Munkeys*. *David Kimhi*, and the *Master of Thalmod*, do call it *Nemiab*, that is, like to a Cat, but commonly they call it a *Martin*, or *Firrup*, and *Furon*. The Authors of the Concordances of the *Hebrews*, do interpret *Qop*, *Circopithecum*, or *Cephum*, and *Culdab*, that is to say, *Musfela*, a Weasel, as the *Jews* do think. The *Chaldeans* hath translated a *Martin* *Osbijn*. *Symmachus* also hath left or forsaken the Hebrew word *Aquilus* doth translate it *Typhoner*, that is, a Whirl-winde, *Hieronymus* doth translate it *Dracon*, that is, a Dragon.

**Dragon** is truly interpreted to be a kind of *Lizard*, or a *Chameleon*; in *Leviticus* 11. We also read in *Alberbus*, *Hir*, and *Hysax*, (two barbarous words) for a *Weasel*, which he himself doth not understand: but I have discerned or taken this signification out of the words of *Alberbus* doth most unlearnedly expound *Hircum* a *Hare*, being deceived; because both the living beasts do oftentimes remove their young ones from one place to another in their mouths. *Fully* also doth seem to be according to *Aristotle*, no other thing then *Gale*, that is to say, a *Weasel*. For *Fryon* (saith he) it hath wit like a *Fox*, that is to say, in setting upon *Hens* or *Chickens*, and the other shape and form of it is *Katze*, that is to say, *Hir*, a *Ferret*. *Namptiza* also is even to this day called a *Weasel* among the *Grecians*. *Ibanage* is also called a *Weasel*, *Ibimurs* is a little four-footed beast. *Bellula* also doth seem to signify a *Weasel*, by a feigned word proceeding from the *French* or *Italian*, which do call also *Beletum*, *Belotum* pro *Muscula*, for a *Weasel*, but some of the later *Grecians* do abuse it, in terming it a *Cat*, as I have spoken before in the *History* of the *Cat*.

do abuse it, in terming it a Cat, as I have spoken before in the History of the Cat. *Theodorus Gaza* in *Aristotle* doth interpret it sometimes a Weasel, and other sometimes a Cat; neither can I sufficiently gather wherefore he doth so change it, seeing that the *Greeks* call *Cattum* for a Cat *Aeluron*, and the *Latines* *Felam*. Some say, that *Muscula* for a Weasel hath been interpreted

or declared of late dayes, being only led (if I be not deceived) with the affinity of the *German* word, for the *Germani* do call *Musela* a *Wifel*. The *Grecians* do usually take for this day *Musela* for a *Weasel*, as I have read in the *Oration of Suidas*. A *Weasel* is called in *Italy* *Damma*, or *Balottula*. It is apparently by the words of *Auicena*, that *Dammula*, and otherwise *Dammia* is barbarously used pro *Musela*. Writers do very obscurely understand *Dama* for a *Weasel*, which is of the kinde of *Gouts* living in the Woods. *Damma* or *Dammula* is a small and weak beast, (as *Ildorum* writeth) speaking of those that are wilde, and will not come to hand. When it doth bring forth young, it doth presently devour the Seconds or those that come after birth, before they touch the earth; and yet it is a prey *Aberim*. Goat, or a *Weasel*, for that kinde of beast which doth devour her Seconds: But we read that neither of these do it.

The Lizard is said to devour her first litter which she littereth in her old age. We also call Domestick Weasels, *Foinas*. A Weasel is called in *France*, *Relette*, or *Belette*, and *Albetrus*. Some say to hear, which do inhabit about the Towns of *Melo*, do call them *Bersac*. *Carpus Figit* doth interpret a Weasel in *French*; *Fovinum*, or *Marturum*, of which I have shewed before that there is two kinds, and also that there are Weasels living in the woods. In *Spain* also they are called *Comedia*. The people of *Rhelia* which speak *Latine*, do keep the *Latine* name. The *Germanes* do call them *Wif* or *Wife*. *Georgius Agricola* saith, that it is called a Weasel by reason of the noise that it maketh. Otherwhile dwelling in *Helvetia*, do call it *Hermelin*, and some do call it by a corrupt *Winter* time. But here in *England* it is called a *Weasel*, and some do write it, *Wesl*, or *Weasle*. But the white Weasel is called *Minever*, by the transposition of the letters of the *French* word, it is called *Hermine*, and among the *Wlans*, *Kolczawa*.

Some do think at this day, that the beast whose shape and form we have given for a Weasel, is the Shrew-mouse, but not rightly, for their only reason is, that the bitings of it doth poyson and harm almost in like manner. *Alas!* it also doth write, that the Sea Weasel is called the field-Shrew, which is utterly false and untrue: For the Shrew is called among the *Grecians* *Myale*, male or female. They do now all commonly call *Jobenman* the Indian Mouse, and otherfome the fallow Deer: But *Dámula*, or *Donula*, is of the *Italians* and some later barbarous Writers, altogether called common Weasel, and not *Jobenman*, which is a peculiar beast to the *Egyptians*.  
Now the true use of this *Jobenman* is,

Now the reason of the *Latine* name *Muscula*, *Carol.* *Figu* is of opinion, that it is derived of *My* *Nipbu*.  
 and *Stellu*, two Greek words, because it devoureth Mice, and both the *German* and the *English* de- The etymolo-  
 riveth their word *Stee*, or *Stellu*, to rob or filch, from the Greek word *Stellu*, so that it is so called, gy of Weasle.  
 because this Weasle is a still, and secret, stealing, and devouring beast. *Calopin* saith, that *Muscula* is  
*quasi* *lingtor* *bluu*. This beast is also called by *Aristotle*, *Habeminum*, and it is said, that it hunteth Moles  
 or blinde Mice.

The Epithets hereof are, *fearfull*, in-creeper, and *swift*, and beside these I finde not any mate. The epithets, *rill*, or *worthy* to be reheated: Now concerning their outward proportion, it is as we have colour, and several parts. here described, a long and thin body, but the colour thereof varyeth: for some of them are brown, and branded, some black, and some clean white, which we have shewed already to be the *Ermyne*, for in some places of *Germany*, *Helvetia*, and the *Alps*, the *Weasels* in the Winter become all white. But forasmuch as there are two kinds of *Weasels*, one vulgar, and domestick, living in houses and Cities, and the other wilde, living in the Woods and Mountains: we finde also that they differ in colour, neither of both being constant in the same; for the domestick *Weasels* upon the back, and side sandy, red, and sometime yellowish, and alwayes white on the throat, yea, sometimes is *Grey*. *Agnella* writeth, they are all white, whereas no man ought to wonder, seeing the *Hares of Helvetia* do in the Winter time turn white: And of these white *Weasels* or *Ermyne* there are abundance in the Northern parts of *Europe*, where their Summers are short, and their Winters long: And these white *Weasels* differ nothing from the common vulgar *Weasels* of other countries, except that their hair stick faster to their backs; and is observed, that in *Russia* the Noblest women are apparelled with these skins: And there is a Wood in *Scandinavia* (called *Lansenwald*) which is fourscore mile long, wherein are abundance of white *Weasels*: And the Kings tents among the *Tartarians* are made to be covered all over with the skins of Lyons without, and the walls to be hung with these *Armine* or white *Weasels* within: and although the price of these skins be very deer among them (for sometimes so many as are used in one Garment will cost two thousand Crowns) yet do the people earnestly seek after them, accounting it no small honour, to wear so much wealth upon their backs.

Now the reason why these beards came to be called *Armituli* is from *Armita* a chain, because they did wear them in fringes about their garments like chains; and although that some of the *Alpini* Mice bear white, and likewise the Pontique Mouse, yet there, perhaps a difference observed betwixt these Weasels which are properly called *Armiti*, and those Mice which are so called, only by way of resemblance, as we have shewed already in their stories. And of the Pontique Mouse, I may add thus much more; that they live in the Winter time in hollow trees, wherein they become as white as snow all over, except their tails, and are in quantity like Squirrels; but in the end of May they turn somewhat red, because that then they give themselves to copulation and generation of young ones, when they lay aside their whiteness, and live many dayes together in carnest copulation.

Of the Lem-  
mar.

lation, among the green and fresh herbs; leaving behind them such rank and unfavoury smells, as are very odious to a good sent: And it is said, that every three year their skins through abundance of food grow greater and greater; to the exceeding commodity of Merchants, and Skinners in Norway, and Helzingia.

There are certain little four-footed beasts called Lemmar, or Lemmus, which in tempestuous and rainy weather; do seem to fall down from the clouds, and it was never yet found, whether they beginning arose first from heaven or earth, but this is certain that as soon as ever they have fallen to the ground, some of them have been opened, and in their bowels have been found green herbs, and therefore I marvel why ever it should be believed that these beasts are bred of some secret matter in the clouds; but if any man ask me from whence then have they their beginning, I answer, from the earth, even as Locusts and Caterpillars, who are said in holy Scripture to be carried to and fro with the windes, and so these beasts being destitute of naturall food in their places of generation, do advance themselves into the winde, and so are carried into other strange and unknown Countreys, where they fall like Locusts upon every green thing, living untill they have devoured all, but when once they taste of new grown herbs, they perish and die, by means whereof they encrease great pestilence and corruption, but the Arminis or Armins do eat and devour them.

Now the Skins of these beasts are exceeding delicate, having in them divers colours, and therefore the people use them off from their bodies, and sell them by thirty or forty in bundles, for great price; but of these skins I have said enough, both here and elsewhere. The wilde Weasels differ from the vulgar domestick Weasel, their foreteeth are short and not long like a Mouse, the face broad, their genital part like a Foxes, their tail short, their legs and claws short, strong and sharp; and it is reported by Strabo, that the Weasels of Mauritania are as big as Cats, but their gaping and opening of their mouth much longer, and wider. There is an Island called Dindorus, on the one side whereof (as Pliny writeth) there are Weasels, and through the middle thereof a way over which they never passe, and on the other side there are not only not any bred, but also if they be brought into it, they die and perish, and so likewise it is reported of Boetia.

Places of their  
abode.

They make themselves caves and holes in the earth, rocks, and walls, wherein they lodge, into the which they frame two passages or doors, one into the South, the other into the North, (resembling herein the Squirrels) that so they may be free from the winde, on which side soever it bloweth, sometimes they get into stacks of Hay and straw, and there they lodge: those Weasels which live near houses sleep not much, for they have been seen abroad all the Winter time, not only the vulgar but the Arminis: neither are they unthankfull unto the Countrey men in whose houses they lodge, for they kill, eat, and devour all manner of Mice, Rats, and Moles; for because of their long, slender bodies, they are apt to creep into the holes of the earth, and narrow passages, fetching their prey from those places which Cats cannot come; therefore in the Countrey men nourish them more then Cats, because they destroy more vermin then Cats, the harm they do is to Hens, Chickens, and Eggs, and yet some say they eat the Eggs and let the Hens alone: they are likewise enemies to Geese, and devour their Eggs; and *Aelianus* writeth, that if they come unto dead men, they will pull out their eyes in such manner as they do Eggs, and therefore such Carcases are to be watched against them. *Amyntas* writeth, that the Shrew-mouse conceived betwixt a Mouse and a Weasel, which opinion is not only ridiculous, but impossible, for how is it likely that a Mouse will ingender with that beast which lyeth in wait to destroy her? It is also said, that a Weasel fighteth with those Serpents that hunt after Mice, for no other cause, but to gain the prey from him.

Their copulation and conception.

There is nothing in this beast more strange, then their conception and generation, for they do not engender nor couple in their hinder parts, like other four-footed beasts, but at their ears, and bring forth their young ones at their mouth, and for this cause *Aristotle* writeth, the Jews were forbidden to eat them, for this their action was an emblem of folly, and of foolish men, which other reasons why the Jews were forbid to eat them. The Egyptians make of it another sign, for they say, that their copulation at the ear, and generation at the mouth, are emblem of speech which is first taught to the ear, and then uttered by the tongue; there be other again that hold this to be a fable: And Pope *Clement* writeth, that they conceive at the mouth, and bring forth at the ear. Many say, it is true of the Weasel of the Sea, but not of the Weasel of the earth, which is therefore called *Gallipara*, and this they would confirm by another fable of *Madusa*, whose head after it was cut off, it is said to bring forth *Chrysol* and *Pigali*; some do alledge for this opinion, that the Crows and the Ibis do conceive at their mouths; but this is certain, that they have places of conception underneath their tails like other four-footed beasts, and therefore how it should come to passe, that their young ones should come forth at their mouths, I cannot easily learn: It may be that the opinion thereof first arose from the sight of some old one, carrying her young in her mouth, for the young ones are very small like Mice, and therefore it is likely that they remove them to and fro, as Cats do their young ones, for they are in continuall fear, lest they should be taken and destroyed by men, or by some other enemy beast.

The dung of Weasels doth smell many times like musk, the reason whereof we have shewed you in another place, all of them in general have a most rank and filthy savour. It is a ravening and destroying beast; and although the body of it be very small, yet is the wit and understanding of it very

very great, for with singular art and subtilty it compasseth his prey, whereupon there lyeth this history of *Galanthis* the maid of *Alcmena*, as *Perottus* observeth out of *Ovid*. When *Alcmena* was in long travel and child-birth, it is said that the maid perceiving she was hindered by *Lucina*, craftily obtained not only the knowledge of the cause by *Lucina*, but also the remedy; whereupon she eased her Lady, (like a true and faithful servant) of many pains. *Lucina* seeing that she was beguiled by *Galanthis*, and that her crafty wit had over-reached a Goddess, she turned her into a Weasel, for her punishment, that as she had sinned by revealing of the counsel of the Goddess, so she should be punished to bring forth all her young ones at her mouth, as Weasels do; and for yellowish like the hair of *Galanthis*: thus say they of metamorphosing and transforming.

Other some say, that when *Alcmena* was in travail of *Hercules*, having endured long torments, she was delivered by the sight of a Weasel which came in her presence, and therefore the *Theban* Goddess, so it did nourish *Hercules*; but herein they take *Gale* for *Galanthis* aforesaid, that is, a Weasel, for *Alcmena's* maid: And seeing we have begun to talk of transformations, I will add another thing out of *Stobaeus*, not impertinent to this common place, for he writeth in the discourse of women, that the diversity of their dispositions persuadeth him that some of them are derived from one beast, and some from another: and namely those which come of Weasels, are or acceptable, but having no minde to the pleasure of *Venus*, loathing her husband, hurteth her neighbours, robbeth her self, and devoureth consecrated and hallowed things, even after the manner of Weasels, which will take a booty from the Altar: Thus faith he, which I believe to be true in the comparison, but not in the generation or transformation of women from Weasels.

I do marvel how it came to passe, that a Weasel was called, an unhappy, unfortunate, and un- The significance of a Weasel's occurrence.

lucky beast among Hunters, for they held opinion, here in England, that if they meet with a Weasel in the morning, they shall not speed well that day; therefore the *Grecians* say *Galestir*, and *Alcman* hath an excellent Emblem, whereby he insinuateth that it is not good to have a Weasel run upon ones left hand, and therefore adviseth a man to give over his enterprize after such an Omen. Now although I would have no wise man to stand in fear of such a superstitious conceit, yet I will subscribe his verses, more for variety and elegancy, then for truth:

*Auspicio res capta malis bene videre nescis:  
Falcio que sunt omnia festis, juvant.  
Quicquid ager, Mustela tibi succurrat, omittit:  
Signa male hac fortis bestia prava gerit.*

It would seem that the beginning of this opinion did come from the punishment of a certain General of the *Caribbians* Navy, who being perjured in breaking his faith to that State, came running away from them; and they say, that afterwards he could never sleep, but that he dreamed Weasels came and tore his flesh from his body: At last through anguish and grief of minde, he slew himself. These things are reported by *Herodotus*, which whether they be true or false, are but a silly and slender foundation to build upon them a Propheticall opinion, or presage future evils; and so I will leave the moral part of the Weasel, and return again to the natural. They have knowledge like Mice and Rats, to run out of houses before their downfall. They live in hatred with the Serpent that hunteth Mice, for by eating of Rue they drive them out of houses wherein they inhabit; and this is a wonderfull work of God, that this filly beast should have the knowledge of the virtue of that herb, and not only arm her self with it, because it is hateful to Serpents, and they in no wise in nature able to abide it, but also by it to restore to life again her young ones after they are dead.

There is a poyson in Weasels which destroyeth the Cockatrice, for when the Weasel findeth the Cockatrice hole or den, she layeth her poyson in the mouth thereof, whereby two contrary natures meet and fight, and the lesser overcometh the greater; and this is affirmed both by *Pliny* and *Salinus*; wherefore all manner of Cattle do fear Weasels. They hunt all manner of birds, pulling out their throats as a Wolf doth a Sheep. They will play with Hares till they have wearied them, and then destroy them; they are in perpetual enmity with Swine, Ravens, Crows, and Cats, for although Cats sometimes set upon them, yet they cannot overcome them. In many places of Italy they are nourished tame, for as Ferrets are used to fetch Conies out of the earth, so are Weasels by tying a string about their neck, to fetch young Pigeons out of Dove-cotes, and birds out of their nests. If the powder of a Weasel be given unto a Cock, Chickens, or Pigeons, it is said, they shall never be annoyed by Weasels.

Likewise if the brain of a Weasel be mingled with a rennet in Cheeses, it keepeth them from being touched with mice or corrupted with age. The flesh of a Weasel is not used for meat, but dried and preferred for medicines. The powder thereof mixed with water, driveth away Mice, by casting the gall of *Sedilium* in a house where Weasels are gathered together, and then by Oyl of bitter Almonds, or salt Ammoniac they are killed, but if one of their tails be cut off, all the residue do forsake the house. And thus much shall suffice concerning the History of Weasels, now followeth the medicines arising out of their bodies.























in a manner seemeth incredible) in very short time. The dung of a Wolf boyled in small white wine, and afterwards taken in drink, is very profitable for those which are troubled with the colick: and it is also reported that if the same dung be covered with the skin of the same beast, and hung upon the thigh of any one which hath the colick being bound with a thread made of the wool of a Sheep slain by a Wolf, it will instantly cure the said disease.

The time of a Wolf, so that it be not found upon the earth, but upon some trees, Brambles, or Butcrufes, being kept, and when there shall be need bound unto the arm of him that shall be troubled with the Colick, or to his neck being included in a bone, or in Copper, and hung with the thread wherewith silk-women weave, doth wonderfully and most speedily cure him, so there be great care had, that in the mean time there be a little of the same dung given to the grieved party to drink, not knowing what it is. The dung of a Wolf being taken, and the bones therein beaten into powder, mingle therewith cold water, giving it to any one to drink which is troubled with the Stone, and it will instantly cure him.

The dung of a Wolf beaten into the smallest powder then strained and given unto any in his fit which is troubled therewith to the quantity of half a Spoonfull in hot water, is a very effectual and approved cure for the Stone. The bones which are found in Wolves, being bound unto the arm of any one which is troubled with the Colick, having never touched the ground, do with great speed and celerity cure him. The pastern bone of a Hare found in the dung of a Wolf, being bound unto any part of the body of him which is troubled with the colick, doth very effectually cure him. The dung of a Wolf with the hairs of a white Ass, taken by any woman in a certain perfume, maketh her apt for conception.

The teeth of a Wolf are unequal, wherefore their bitings are very dangerous. A ravening Wolf by his biting bringeth the same danger, as a ravenous Dog, they also are cured by the same medicines, as we have declared at large in the story of the Dog. The wounds which come by the teeth or nails of a Wolf are very dangerous, for the filth which pierceth through all clouts or sponges which are laid upon them: But they are cured by no other means then the bitings of Dogs: Asius writeth these things concerning the biting of a Lion, and not of a Wolf.

Johannes Vitus the Hungarian declared that there were certain men in Hungary bitten by a mad Wolf, and that they were as it seemed presently cured: But before forty dayes expired they all died by a most bitter or painfull disease, small pieces of flesh encreasing through their urine in the form of Dogs, with an exceeding pain or torment. It is also reported of a certain Countryman, who when he had stricken a Wolf with his Club, and the Wolf had so torn his face with his nails, that he pulled off the skin, he was in short time healed that there appeared no sign of any harm, but in short time after he began to be sick, and to howl like unto a Dog, and so perished; by which it was conjectured that that Wolf was mad. An Oxe being bitten by a mad Wolf or Dog is cured by Garconfectured that that Wolf was mad. An Oxe being bitten by a mad Wolf is also healed of any wound by lick, being beaten and rubbed upon the wound: the Wolf himself is also healed of any wound by old salt flesh applied unto the same. Two drams of Gentian being drunk in wine, is an excellent cure for the bites of a mad Dog and ravening Wolves, as also of all beasts tearing with their teeth or nails. The bites of Wolves being marked in the bodies of any Cattell, are burned or seared with a hot Iron, lest that the biting be assuredly hurtfull, may draw unto it self corruption. And thus much shall suffice concerning the medicines of the Wolf.

#### Of the ZEBEL, commonly called a SABEL.

Among all the kindes of Weasels, Squirrels, Wood-mice, wilde Mice, or other little beasts of the world, there is none comparable to this Zebel, commonly called in Latine *Zebelin*, and *Zobela*, from whence the Germans call it *Zobel*, the *Illyrians* and *Polonians*, *Sobol* and *Sobol*, the *Indians*, *Sest*, and *Sablins*: The skins hereof are called *Zebelline*, and *Zobelline*, and sometimes *Zibeline*. Its breed in *Muscovia*, and the Northern parts of the World, among the *Lapones*, but no where more plentiful then in *Tartaria*, *Scythia*, and *Sarmatia*, and it is therefore called by some *Mus Scythicus*, the *Scythian* Mouse. The French men because of the similitude it hath with a Martin, do call it by a compounded name, *Marteau Soubeline*. It liveth for the most part in the Woods, being lesser then a Martin every way, and hath also shorter legs: They run up and down upon trees like Squirrels, easily fastning their claws in the boughes; when they leap, their tail serveth them instead of a cross Beam to direct them. They bite most irefully, for their teeth are as sharp as Razors, and there is no beast in the World of their quantity so angry and terrible as they: their flesh is unprofitable and good for nothing. The only price and estimation of this beast is for the skin, which farre exceedeth all the skins of the World, either *Ermings*, *Martins*, or *Foines*, differing herein from the *Martins*, because their hair is thinner, and if you stroke them from the head to the tail, or on the contrary from the tail to the head, they do lie every way smooth, whereas the *Martins* do only fall smooth from the head to the tail.

These are more subject to Worms then other skins, except they be continually worn, or laid up with bunches of Wormwood; but above all other things the laying of them open one day together in the Sun or air, doth him more harm then a whole years wearing, for the beast it self liveth evermore in shadowy places, forbearing the sun except he be hunted, and catcheth small birds in secret. In the furthest part of *Lituania* they have little or no money, and therefore the Merchants which traffique thither do exchange their wares for *Zebel* or *Sabel* skins; those are the best which

have most white and yellow hairs mingled in them, and the Garments of Princes are only fringed and lined with these *Sabel* skins, and honourable Matrons, ancient Noble men and their Wives do likewise use two or three of these to wear about their necks; for it is certain that a garment of these skins is much dearer then cloth of Gold, and I have heard and also read, that there have been two thousand Ducks payed for so many as were put in one Cloak.

It is a very libidinous and lustfull beast, and at that time sinketh very rankfully, wherefore it minglith it self with *Martins* of all sorts that it meeteth. And thus much shall suffice to have discoursed of this little beast. Now there are divers other which seem to be of this kinde, of which, though I have not much to say, yet rather then they should be omitted, I will expresse their bare names, that so I may give occasion to all our Country-men that shall travell into other Nations, to make enquiry after them, that so at their return, if they have any conscience of publique good, they may get themselves eternall fame and names, by communicating publicly their own knowledge, experience, and learning, which they have gained in these, or other Four-footed beasts.

#### Of the NOERTS.

This beast is of the quantity of a Weasel, and by the Germans called *Noerts*, and *Nerts*, from which word the Latines have their *Noerza*, for this beast. It liveth (as *Georgius Agricola* writeth) in the Woods, betwixt *Suevia* and *Vistula*, the colour of the hairs which is short and smooth, is for the most part like an Otters. Their skins are sold at *Frankford* by forty in a heap or bundle, they are long, and more red then the Ferrets, every bundle most commonly is sold for six and twenty Nobles. Some think that this is the *Latax*, spoken of before, because it getteth his living in the waters.

#### Of the VARMELE.

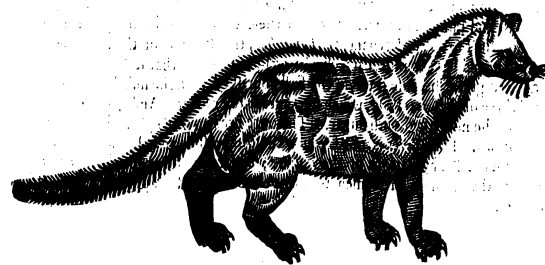
This beast is called by the Latines *Varmela*, by the Germans *Wormlein*, it is lesse then a Ferret, the belly whereof is black, all the residue of the skin full of white, pale, red, and yellow spots, which adorneth it in admirable manner, very comely and excellent to be looked upon, the tail not past half a hand breadth long, the tip whereof is black, but the hairs of the residue mixed with white and ash colour together.

There is another beast which for the variety of the colours, which are apparent in his skin, he is called a *Salamander*, not that which liveth in the fire, but one like unto it, having a gentle hair, distinguished all over into black and yellow spots, and these because of our ignorance we reckon among our outlandish Weasels.

In India there is a little beast called *Chivora*, having a very precious skin, and this (as *Cardan* writeth) hath a bag under the belly, wherein it suffereth his young one to go in and out, as before we have said of the *Simulupa*, or *Foxe-Ape*.

There is another little beast in Hungary, called *Unoken*, which dwelleth in holes of the earth as Conies do, the outward proportion whereof is like a Weasel, but it is much thinner and longer, the colour of the back is red, and all the residue of the body Mouse colour. Now although I do not read any speciall use of the skin of this beast, yet I thought it good to name it in this place, because it is reported that the breathing thereof upon the face of man is venomous and poysonfull, for when Soldiers sleep in their tents upon the earth, they come many times and look in their faces and poyson them: And thus much for the *Zebel*, and the severall kindes of this little beast.

#### Of the ZIBETH, or SIVET-CAT.



The best description that is of this beast in all the World, that I could ever finde, was taken by Doctor *Coy*, and thus sent as it is here figured to Doctor *Gagner* with these words following. There came to my sight (saith Doctor *Coy*) a *Zibeth* or *Sivet* very lately, which was brought out of *Africa*, the picture and shape whereof in every point I caused to be taken, which is this prefixed, that one Egge is not more like another, then this is to the said *Sivet* or *Zibeth*. It is greater then any

any Cat, and lesser then a *Taxus*, having a sharp face like a Martin, a short, round, blunt ear, which was black without, but pale within, and on the brims a blew sky-coloured eye, a foot and leg black, and more broad or open then a Cats: Likewise a black claw, neither so crooked, nor so ind in the foot as it is in a Cat, but their teeth are more fearfull and horrible. It is all spotted over the body, but the nose thereof is black, the nether part of the upper chap pale, and the middle part black, and from thence to the top of the head it is of the colour of a Badger. The lower chap was all black, and the bristles of the upper chap were white, growing forth of a pale skin, and a little above the eye there were two other white ones growing forth of a black skin.

The throat thereof was black, and a little above the eye there arise three black lines or strokes, whereof the first or uppermost descendeth down right to the throat, the second descendeth compassse in and out to the middle of the neck, and the third down to the shoulder; and then a little beneath that place on the contrary, arise two other black lines like circles ascending in the compassse of the shoulder to the back bone: and all the residue of the body is distinguished and parted into many colours, having divers and sundry black spots scattered abruptly throughout the whole circuit, whereof some are continued and joyned together. For that which is upon the back is continued from the shoulder, and the second and third arising in that part, are broken and divided, the fourth and all the residue are in like sort discontinued and separated one from the other, so that their position runneth all in length.

The first part of his tail to the middle is spotted, and all the residue black. The hair bottom the face, legs, and feet, is soft, and very gentle to be handled, falling down, but in all other parts of the body, it is harsh, deep, and standing upright: the spots doth both ascend and descend, the tongue hereof was smooth and not rugged, and under the tail was the passage for the excrements after the fashion in other beasts, and a little beneath the same was the receptacle or bag containing the Sivet, and a little space after that the privy part of the male which was hid or sheathed in the body. The beast being moved to anger, uttereth a voyce like to the voyce of an angry Cat, withall doubling the letter R R. but being not angry the voyce is like a young Cats although lower.

This *Zibeth* was in length from the head to the tail, one foot, three palms, and one Roman finger breadth, but the breadth thereof under the belly, was one foot, two palms, and three Roman fingers. It was a gentle and tractable Creature, and was sold for eight pounds of English money, in a French twenty four Crowns, or in Florent forty and eight. These things are said by Doctor Cay. Now unto this *Gesner* addeth, that he received such another Picture from one *Johann Kestmann*, which he took by another of these Cats in the possession of the Duke of Savoy, and he said that it was bought by him for seventy Taters (every Tater being worth in our English money eight pence half penny) in the year of the Lord, 1545. This beast is a very clean beast, men, and the hater of filthinesse: the Sivet or liquor distilled out of the Cod, must be taken away every few Vessels clean washed. The Sivet or liquor distilled out of the Cod, must be taken away every second or third day, or else the beast doth rub it forth of his own accord upon some poste in his kennel, if he be tamed or inclosed. This Sivet is an Excrement not growing in the secret part only, but of at the beginning is like Butter, but afterwards it groweth more sad and brown: one ounce of it if it be pure and not sophisticated, is sold for eight Crowns at the least. There be Impolitors, which do adulterate it with an Oxes gall, Styraz, and Hony. This is of a strange favour, and preferred before Musk by many degrees, yet it smelleth worse if it be held hard to the nose: It is said that the liquor running out, doth go back again if any Vessel be put to receive it, except it be a Silver Spoon or Porringer.

Leo After saith, these Beasts are wilde, untamable, and live upon flesh, but the European Merchants buy of the young ones and nourish them tame, with Bran, Milk, hard Egges, and other things, and that so they convey them into Europe out of *Africk*: emptying their Cods twice or thrice a day in the hot Countreys; and that this Sivet is nothing else but the sweat of the beast under the ribs, fore-legs, neck, and tail. There were divers of these *Zibeths* tamed among other. It is reported of a Consul of the Florentine Merchants at *Alexandria*, that had one of these so tame, that it would play with a man, and bite his nose, ears, cheeks, or lips so gently that it should not be felt, thereupon whereof was given, because it was at the first nourished with the milk of a Woman. Cardinal *Galotto* had three of these at Rome, which he kept for their Sivet: And *Oibo* Duke of *Bonia*, had also one which he nourished with Sugar. They are bred in *Æthiopia* and *India*, about the City *Pegu* and *Tanalar*. Their Sivet is not savoury till it be washed and cleansed. It is said to be very excellent against the strangulations of the wombe; and it is good against the Colick: It hath also vertue to purge the wombes of women, to purge the brain, and is applied to many other diseases and infirmities.

The end of the History of Four-footed Beasts.

# THE HISTORY OF SERPENTS:

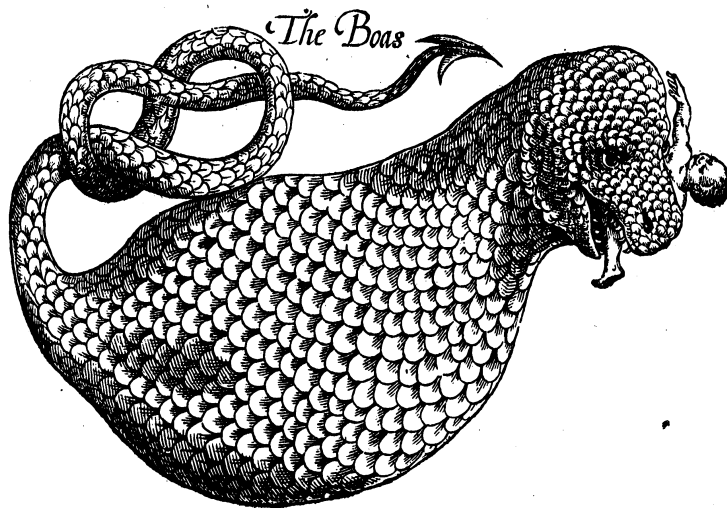
## OR, The second Book of living Creatures:

WHEREIN IS CONTAINED

Their Divine, Natural, and Moral descriptions, with their lively Figures, Names, Conditions, Kindes, and Natures of all venomous BEASTS: with their severall Poysons and Antidotes; their deep hatred to Mankind, and the wonderful work of God in their Creation, and Destruction.

Necessary and profitable to all sorts of Men: Collected out of divine Scriptures, Fathers, Philosophers, Physicians, and Poets: amplified with sundry accidental Histories, Hieroglyphicks, Epigrams, Emblems, and Ænigmatical Observations.

By EDVVARD TOPSELL.



London, Printed by E. Coles, 1658.



## To the Reader.



Entle and pious Reader, although it be needlesse for me to write any more of the publishing of this Treatise of Venemous Beasts, yet for your better satisfaction and direction, briefly take this which followeth.

After the publishing of the former book of *Four-footed Beasts*, I understood of two things much misliked therein, wherein I also my self received a just offence.

First, the manifold escapes in the Presse, which turned and sometimes overturned the sense in many places, (especially in the *Latine*) which fault as it may in part concern me, so yet it toucheth another more deeply, yet are both of us excusable: He in wanting the true knowledge of the *Latine* Tongue; and I, because of my employment in my Pastorall charge, and both of us together, because we were not so thoroughly estated, as to maintain a sufficient Scholar to attend only upon the Presse. Wherefore, in this second Book, we have removed away that blot, and used a more accurate diligence, and I trust there is no escape committed perverting the sense, and not very many altering the letters.

The first fault is in this Edition amended.

The second exception taken against the former Treatise, was the not Englishing or translating of the *Latine* Verses, which thing I purposed to have done, if I had not been overhastened in the businesse; for it had been to the work an Ornament, and to the History a more ample declaration: This fault I have now amended in the setting forth of this second Book of *Living Creatures*. All therefore that can be said for your direction, I could wish the History more compleat for the manifestation of the most blessed *Trinities* glory, whose works are here declared; and for the better revelation of the severall natures of every Serpent. I may fail in the expressing of some particular, yet I suppose that I have omitted no one thing in their narration, which might be warranted by good authority or experience. And therefore, although I cannot say that I have said all that can be written of these living Creatures, yet I dare say I have wrote more then ever was before me written in any Language.

Ecc

Now

Now therefore ask the Creatures (after God) and they will tell you: For, saith S. Austin, *Interrogatio creaturarum profunda est consideratio ipsarum: responsio earum, attestatio ipsarum de Deo, quoniam omnia clamant, Deus nos fecit.* The asking of the Creatures is a deep and profound consideration of their severall natures: their answer is, their attestation or testimony of God, because all of them cry out, *The Lord hath made us.* Wherefore, seeing it is most true, *incognita non desiderantur*, things unknown are not desired, to the intent that all true English Christians may hereafter more affectionately long after and desire, both the mysticall vision of God in this World, and also his perfect sight in the World to come, I have (for my part) out of that weak ability wherewith I am endued, made known unto them in their own mother Tongue, the wonderfull works of God; for the admiring of Gods praise in the Creatures, standeth not in a confused ignorance, nor knowing the beginnings and reason of every thing, but rather in a curious and artificiall investigation of their greatest secrets.

Therefore, let all living men consider every part of divine wisdom in all his works; for if it be high, he thereby terrifieth the proud, by the truth he feedeth the great ones; by his affability he nourisheth the little ones. And so I will conclude my Preface with the words of the three Children: *Dall ye works of the Lord, praise him and magnifie him for ever.*

Edward Tophell.



# A GENERAL TREATISE OF SERPENTS, DIVINE, MORAL, and NATURAL.

Of the Creation and first Beginning of SERPENTS.



Here is no Man that can justly take exception that this History of Serpents beginneth at their Creation: for seeing our purpose is, to set forth the works of GOD, by which as by a clear glass, he endeavoureth to disperse and distribute the knowledge of his Majesty, Omnipotency, Wisdom and Goodness, to the whole race of Mankind, it seemeth most proper that the first stone of this building, laid in the foundation be fetched from the Creation: and the rather, because some Naturalists (especially amongst the ancient Heathen) have taken the Original of these venomous Beasts, to be of the earth, without all respect of Divine and Primary Creation. And hereunto some Hereticks, as the Manichees, and Marcianites, have also subscribed, though not directly, for they account the Creation of these venomous and all hurtful Beasts an unworthy work for the good GOD, because they could never see any good use of such creatures in the World. Augustine. Epiphanius.

Yet we know the blessed Trinity created the whole frame of this visible World by it self, and for good, reasonable, and necessary causes, framed both the beneficial and hurtful Creatures, either for a Physical or Metaphysical end. Therefore it is most certain, that if we consider the outward parts of these Creatures endued with life, no man nor nature could begin and make them, but the first Essence or Fountain of life: and if we can be brought to acknowledge a difference betwixt our shallow capacity, and the deep wisdom of God, it may necessarily follow by an unavoidable sequel, that their uses and ends were good, although in the barrenness of our understanding; we cannot conceive or learn them. But I purpose not to follow these things Philosophically by arguments, but rather Divinely by evident demonstration of the things themselves. And first of all, it appeareth, Gen. 1.24. that God brought out of the earth *all creeping things* after their kind: And lest that any man should doubt, that under the general name of creeping things, Serpents, and other venomous Beasts, were not intelligibly enough expressed, it is added Chap. 3.1. *That the Serpent was more subtle then all the Beasts of the field which God had made.* The Prophet David also, Psal. 148. 7. among other things which are exhorted by the Prophet to praise their Creator, there are named Dragons, which are the greatest kinde of Serpents. Unto this also alluded S. James, ch. 3.7. saying: *That the whole nature of Beasts, and of Birds, of creeping things, and things in the Sea is tamed by the nature of Man: for Man, which is next unto God, hath authority and power, to rule over all his works, and therefore over Serpents.* Zanchinus.

And herein it is fit to shew, what wonders men have wrought upon Serpents, taming and destroying them rather like Worms and Beasts, no ways enemies to mankind, but friendly, and endued with sociable respect, or else as weaklings commanded by a superior power. Such an one was Ayr a notable Inchanter, who by touching any Serpent brought it into a deadly sleep: according to these verses;

*Nec non Serpentes dero exarmare veneno,  
Dolus Atyr: talisque graves sepiore chelydros.*  
In English thus;

The cunning Ayr, Serpents fierce, of poison did disarm,  
And Water-snakes to deadly sleep, by touching he did charm.

Ecc 2

Alvism



*Alvifus Cadamustus*, in his description of the new World, telleth an excellent history of a *Ligurian* young man, being among the *Negroes* travelling in *Africk*, whereby he endeavoureth to prove, how ordinary and familiar it is to them, to take and charm Serpents, according to the verse of the Poet :

*Frigidus in pratis camando rumpitur anguis.*

That is,

*The cold-earth-snake in Meadows green,  
By singing, broke in pieces may be seen.*

The young man being in *Africk* among the *Negroes*, and lodged in the house of a Nephew to the Prince of *Budaniel*, when he was taking himself to his rest, suddenly awaked by the hearing the unwonted noise of the hissing of innumerable sorts of Serpents; whereat while he was waked, and being in some terror, he heard his Host (the Princes Nephew) to make himself ready to go out of the doores, (for he had called up his servants to saddle his Camels :) the young man demanded of him the cause, why he would go out of doores now so late in the dark night? to whom he answered, I am to go a little way, but I will return again very speedily: and so he went, and with a charm quieted the Serpents, and drove them all away, returning again with greater speed than the *Ligurian* young man his guests expected. And when he had returned, he asked his guests if he did not hear the immoderate hissing of the Serpents? and he answered, that he had heard them to his great terror: Then the Princes Nephew (who was called *Bibboror*) replied, saying; they were Serpents which had beset the house, and would have destroyed all their Cattel and Herds, except he had gone forth to drive them away by a charm, which was very common and ordinary in those parts, wherein were abundance of very hurtful Serpents.

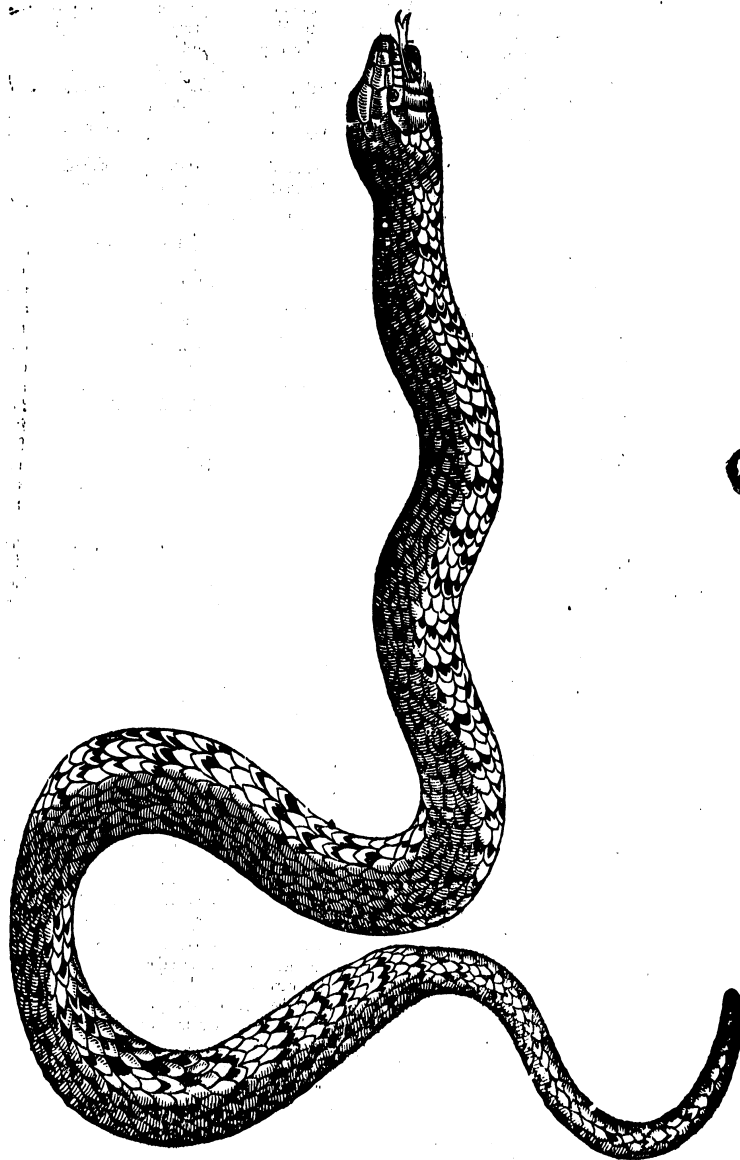
The *Ligurian* young man hearing him say so, marvelled above measure, and said, that this thing was so rare and miraculous, that scarcely Christians would believe it. The *Negro* thought it as strange that the young man should be ignorant hereof, and therefore told him, that their Prince could work more strange things by a charm which he had, and that this and such like were small, vulgar, and not to be accounted miraculous. For when he is to use any strong poyson upon present necessity, to put any man to death, he putteth some venom upon a sword, or other piece of Armor, and then making a large round circle, by his charm compelleth many Serpents to come within that circle, he himself standing amongst them, and observing the most venomous of them all to assemble, which he thinketh to contain the strongest poyson, killeth him, and causeth the residue to delect the seed of a certain vulgar tree, and therewithal anointeth his dart, arrow, or sword's point, whereby is caused present death, if it give the body of a man but a very small wound, even to the breaking of the skin, or drawing of the blood. And the said *Negro* did earnestly persuade the young man to see an experiment hereof, promising to shew all as he had related, but the *Ligurian* being more willing to hear such things told, then bold to attempt the trial, told him, that he was not willing to see any such experiment. And by this it appeareth, that all the *Negroes* are addicted to Incantations, which never have any approbation from GOD, except against Serpents, which I cannot very easily be brought to believe.

And seeing I have entered into this passage of Charming, being (no doubt) an invention of Man, and therefore argueth his power to tame these venomous Beasts, according to the former saying of Saint James, although I condemn such courses utterly, yet it is lawful to prosecute the same, seeing the holy Ghost, Psalm 58. vers. 4. 5. affirmeth a practise against Serpents, a dexterity and ripeness in that practise, and yet an impossibility to affect any good, except the voice of the Charmer come to the ear of the Adder: For thus he writeth: *Their poyson is like the poyson of a Serpent-like a deaf Adder that stoppeth his ear. 5. Which heareth not with the voice of the Incubator, though he be most expert in cunning.* Upon which words Saint Augustine, Saint Jerome, and Cassiodorus writing, say; that when the Charmer cometh to Inchant or Charm, then they lay one of their ears to the earth so close, as it may not receive the sound, and their other ear they stop with their tail. I will therefore yet add somewhat more of this taming of Serpent.

I have heard a Gentleman of singular learning, and once my worshipful good friend, encourage unto all good labours, report divers times very credibly, upon his own knowledge and eye-sight, that being at *Padua* in *Italy*, he saw a certain Quack-salver, or Mountebank upon a stage, pull a Viper out of a box, and suffered the said Viper to bite his flesh, to the great admiration of all the beholders, receiving thereby no danger at all. Afterward he put off his doublet and shirt, and shewed upon his right arm a very great unwonted blew vein, standing beyond the common course of nature; and he said, that he was of the lineage of Saint Paul, and so were all other that had these veins, and that therefore (by special virtue to that Family given from above) no Viper nor Serpent could ever annoy or poyson them: but withall, the fellow drank a certain compound water, or antidote, for fear of the work, and so at one time vented both his superstitious hypocrisie, and also much of his Antidote to his great advantage.

But I have since that time also read, in *Matthiolus* his Commentaries upon the sixth Book of *Discordes*, that there were wont to be many such Juglers in *Italy*, carrying in their bosomes living Serpents, of whose fraudulent Impostures he speaketh in this sort. They take Serpents in the

Mr. Will.  
Morley of  
Glynde in  
Sussex.





*Faustina* the Emperess dreamed that she brought forth Serpents, when she was with child of *Commodus* and *Antoninus*, and one of these Serpents seemed more fierce then the other, which proved allegorically true: for afterward *Commodus* was so voluptuous and tyrannous, that he seemed like a Serpent to be born for nothing, but for the destruction of mankind.

In the year of our Lord 1551. there was a little *Latine* Book printed at *Vienna*, wherein was contained this History following. In this Summer (saith the Book) about *S. Margerites* day, there happened most rare and admirable accidents: for near a Village called *Ziebsa*, by the River *Theise* in *Hungaria*, there were many Serpents and Lizards bred in the bodies of men, very like to such as are bred in the earth, whereupon they fell into exquisite torments: and there dyed of that calamity, about three thousand, and some of the bodies being laid against the Sun gaping, the Serpents came forth of their mouths, and suddenly entered into their bellies again. Amongst other, there was a certain Nobleman's daughter which dyed of that malady, and when she was dissected or ripped, there were found in her body two great Serpents. These things seem to be mischievous, and above the order of Nature: yet credible, because in our experience in *England*, there have been Worms like Serpents found in the bodies of men, whereof some have been ejected the parties being alive, and other when as the parties were dead. But that these beginnings of Serpents being unnatural, are Divine and sent from God as scourges, it may appear by another notable History, recorded in the aforementioned Book, both in the same year, and in the same Country.

There was (saith mine Author) found in a mow or ryck of Corn, almost as many Snakes, Adders, and other Serpents, as there were sheafs, so as no one sheaf could be removed, but there presently appeared a heap of ugly and fierce Serpents. The Country-men determined to set fire upon the Barn, and so attempted to do, but in vain, for the straw would take no fire, although they labored with all their wit and policy to burn them up. At last, there appeared unto them at the top of the heap a huge great Serpent, which lifting up his head spake with mans voice to the Country-men, saying: Cease to prosecute your devise, for you shall not be able to accomplish our burning, for we were not bred by Nature, neither came we hither of our own accord, but were sent by God to take vengeance on the sins of men. And thus much for the true and natural beginnings of Serpents.

Now we read in read in holy Scripture, that the rod of *Moses* was turned into a Serpent by divine miracle, whereby he was assured of the power that God would give him to deliver his people *Israel* out of *Egypt*, which land abounding with Serpents, both natural bred in the earth, and mortal, such as are crafty and politick Princes and people: yet *Moses* should take them as he did his Serpent by staffe: tail, and cause them to bend unto him like as it were a wand, or else some other little walking staffe: and also that his power should be irresistible, because his Serpent devoured others. The Magicians or Sorcerers, (as *Jannes* and *Jambres*) resisted him, and also turned their rods into Serpents. But *Moses* did it by true piety, they by diabolical delusions, as false Christians many times work miracles by outward signes of true piety, and therefore *Moses* rod overcame the Sorcerers Serpents, because the end of fraud and falsehood is, to be overcome by truth and piety.

From this changing of rods into Serpents, came the several metamorphosing of sundry other things into Serpents also, as that tale of *Orpheus* head, after he was torn in pieces by the *Thracian* women; and the same thrown into a River, was taken up in *Lemnos*. The Poet describeth it thus;

*Hic serpens expositus peregrinis anguis aeneis  
Os patet, & parvos stillantem rore capillos  
Lambit, & hymniferos imbiat divellere vultus:*

In English thus;

*No sooner on the forain coast now cast a land they were,  
But that cruel natur'd Snake did straight upon them fly,  
And licking on his rusted hair, the which was dropping dry,  
Did gope to tyre upon those lips that had been wont to sing  
The heavenly hymner. But Phobus straight preventing that same thing,  
Disposeth the Serpent of his bait, and turns him into stone,  
With gaping chaps, &c.*

So *Isacius Tzetzes* writeth, that when *Tiresia* found Serpents in carnal copulation in *Cithaen*, he slew a female, who presently after death was turned into a Woman, then also he slew a male, who likewise being dead, was in the same place and manner turned into a Man. When *Cadmus* was sent by his Father, to seek out his sister *Europa* that was ravished by *Jupiter*, with straight charge not to return back again except he could finde her, having spent much time in seeking her to no purpose, because he could not finde her, and not daring to go back again to his father; he was warned by the Oracle that he should go into *Bœotia* to build a City. Coming thither, he sent his companions to the fountain of *Mars* that was in the Country to fetch water, where a great Serpent came and killed them; at last, *Cadmus* not finding their return, went likewise to the same Fountain, where he found all his men slain, and the Serpent approaching to assail him but he quickly killed it. Afterward he was admonished by *Pallas*, to throw the teeth of the same Serpent upon the ground, which he performed, and then out of those teeth (saith *Ovid*) arose a multitude of Armed men, who instantly fell to fight one with the other, in such cruel and bloody manner, that at the last there were but five of them all left alive, which five (by the will of *Pallas*) were preserved to be the Fathers

of the people of *Thebes*. And so *Apollonius* saigneth, that with the help of men bred of Serpent, teeth, came *Jafon* to obtain the Golden Fleece.

They saign also, that *Abelous* when he strove with *Hercules* about *Deianira*, turned himself into divers shaps, and last of all into a Serpent, or as some say, into a River. So likewise *Cadmus* aforesaid, being overcome with the sight and sense of his own miseries, and the great calamities that befall to his Daughters and Nephews, forsook *Thebes*, and came into *Ilyrium*, where it is said, that he earnestly desired of the Gods to be turned into a Serpent, because a Serpent was the first original of all his extremities. *Amipater* saigneth *Jupiter* to be turned into a Serpent; and *Medusa* refusing the love of *Nepheus*, is also saigned by *Ovid* to be turned into a Serpent, when he writeth;

*His telegestor templo vitasse Minerva  
Ducit, averia est & castos Ægide vultus  
Non Jovis tenet: neve hoc impune sulset,*

In English thus;

*It is reported how she should abus'd by Neptune be,  
In Pallas Church, from which soul fell Joves daughter turn'd her eye:  
And lest it should unpunish'd be, she turn'd her seemly hair  
To loathsome Snakes, the which the more to put her fess in fear,  
Before her breast continually she in her hand doth bear.*

*Virgill* writeth, that the myrtle rod was not lawful to be brought into the Temple of *Hecate*, and that a Vine branch was extended over the head of her sign: and whereas it was not lawful to name Wine, they brought it into her Temple under the name of milk, and that therein continually lived harmless Serpents. The reason of all this was, because that her own Father *Favrus* fell in love with her, whom she resisted with all modesty, although he were beaten with a Myrtle rod, and made to drink Wine; but at last the beastly father was transformed into a Serpent, and then he oppressing her with the spires of his winding body, ravished her against her minde. These and such like stories and Fables are extant about the beginnings of Serpents; all which, the Reader may consider, to stir up his minde to the earnest and ardent meditation of that power that of stones can make men, of Rocks, water, of water, Wine; and of small Rods great Serpents.

Then thus having exprest the Original of Serpents in their Creation, it followeth now to add *Pliny*, the residue of this Chapter about their generation. It is a general rule that all Beasts wanting feet *Aristotle*, and have long bodies, perform their work of carnal copulation by a mutual embracing one of the other, as Lampreys and Serpents: And it is certain, that two Serpents in this action seem to be one body and two heads, for they are so indivisibly united and conjoynd together, and the frame of their body is altogether unapt for any other manner of copulation. When they are in this action they tend forth a rank favour offensive to the sense of them that do perceive it: And although like unto many fishes, they want stones, yet have they two open passages wherein lyeth their generative seed, and which being filled, provoketh them to their venerall lult, the seed it self being like a milky humor; and when the female is under the male, she hath also her passages to receive the seed, as it were into the cells of her womb, and there it is framed into an Egge, which she hideth in the earth an hundred in a cluster, about the quantity of a Birds egg, or a great bead, such as are used sometime by women.

And this is general for all Serpents, except Vipers, who lay no Egges, but hatch in their wombs their young ones, as we shall shew at large in their particular history. The Serpent having laid her Egge sitteth upon them to hatch them at several times, and in a year they are perfected into young ones. But concerning the supposed copulation of Serpents and Lampreys, I will not meddle in this place, reserving that discourse to the History of Fishes, and now only it sufficeth in this place to name it, as a feigned invention; although Saint *Ambrose* and other ancient Writers have believed the same, yet *Athenæus*, and of late days *P. Jovius*, have learnedly and sufficiently declared by unanswerable arguments the clean contrary. The Serpents love their Egges most tenderly, and do every one of them know their own, even among the confused heaps of the multitude, and no less is their love to their young ones, whom for their safeguard, sometime they receive into their mouths, and suffer them to run into their bellies: And thus much for the generation of Serpents.

### Of the Names of Serpents, and their several parts of Anatomy.

**B**Y Serpents we understand in this discourse all venomous Beasts, whether creeping without legs, as Adders and Snakes, or with legs, as Crocodiles and Lizards, or more neerly compacted bodies, as Toads, Spiders, and Bees, following herein the warrant of the best ancient Latinists, as namely *Cornelius Celsus*, *Pliny* and *Apuleius* do call Lice Serpents, in that their relation of the death of *Pherecydes* the *Syræan*, who was the Præceptor of *Pythagoras*, of whom it is said, *Serpentibus perisse*, to have perished by Serpents, when on the contrary it is manifested he was killed by Lice. *Aristotle* and *Galen* define a Serpent to be animal sanguinem pedibus orbatum & oviparum, that is a bloody Beast without feet, yet laying egges; and so properly is a Serpent to be understood.

The



of the quantity of Serpents, and their abode, food, and other accidents.

SO great is the quantity of Serpents, and their long during age increaseth them to so great a stature, that I am almost afraid to relate the same, lest some suspicious and envious minded persons should utterly condemn it for fabulous; but yet when I consider not only the plentiful testimonies of worthy and undoubted Antiquaries, and also the evidence of all ages, (not excepting this whereof we live) wherein are and have been shewed publickly many Serpents, and Serpents skins, I receive warrant sufficient to express what they have observed, and assured answer for all future Objections, of ignorant, incredulous, and unexperienced Asses. Wherefore as the life of Serpents is long, so is the time of their growth; and as their kinds be many, (as we shall manifest in the succeeding discourse) so in their multitude, some grow much greater and bigger than other.

*Gellius* writeth, that when the *Romans* were in the *Carthaginian* war, and *Attilius Regulus* the Consul had pitched his Tents near unto the River *Bragara*, there was a Serpent of monstrous quantity, which had been lodged within the compass of the Tents, and therefore did cause to the whole Army exceeding great calamity, until by casting of stones with slings, and many other devices, they were oppressed and slew that Serpent, and afterward flayed off the skin and sent it to *Rome*, which was of length one hundred and twenty feet. And although this seem to a beast of unmatched greatness, yet *Possidinius* a Christian Writer, relateth a story of another which was much greater, for he writeth, that he saw a Serpent dead, of the length of an acre of Land, and all the residue both of head and body, were answerable in proportion, for the bulk of his body was so great, and the wideness lay so high, that two Horsemen could not see one the other being at his two sides, and the wideness of his mouth was so great, that he could receive at one time within the compass thereof, a Horse and a man on his back both together: The scales of his coat or skin, being every one like a large buckler or target. So that now there is no such cause to wonder at the Serpent which is said to be killed by *S. George*, which was as is reported so great, that eight Oxen were but strength enough to draw him out of the City *Silena*.

There is a River called *Rhyndacus* near the Coasts of *Bythina*, wherein are Snakes of exceeding monstrous quantity, for when through heat they are forced to take the water, for their fatigue against the Sun, and birds come flying over the pool, suddenly they raise their heads and upper parts out thereof, and swallow them up. The Serpents of *Megalania*, are said by *Pausanias* to be thirty cubits long, and all their other parts answerable. But the greatest in the world are found in *India*, for there they grow to such a quantity, that they swallow up whole Bulls and great Stags. Wherefore I do not marvel that *Porus* the King of *India*, sent to *Augustus Caesar* very huge Vipers, a Serpent of ten cubits long, a Tortoise of three cubits, and a Partridge greater than a Vulture. *Alexander* in his Navigation upon the Red-sea, saith; that he saw Serpents forty cubits long, and all their other parts and members of the same quantity.

Among the *Syria*, the Serpents come by great swarms upon their flocks of Sheep and cattle, and some they eat up all, others they kill and suck out the blood, and some part they carry away. But if ever there were any thing beyond credit, it is the relation of *Volatran*, in his twelfth Book of the *New-found Lands*, wherein he writeth, that there are Serpents of a mile long, which at one certain time of the year come abroad out of their holes and dens of habitation, and destroy both the Herds and Heard-men if they find them. Much more favourable are the Serpents of a Spanish Island, who do no harm to any living thing, although they have huge bodies, and great strength to accomplish their desires.

In the Kingdom of *Senega*, their Serpents are so great that they devour whole Beasts, as Goats, and such like, without breaking any one of their bones. In *Calecut*, they are as great as these greater Swine, and not much unlike them, except in their head, which doth far exceed a Swine's. And because the King of that Country hath made a Law, that no man kill a Serpent under pain of death, they are as great in number as they are in quantity: for so great is his error, that he deemeth it as lawful to kill a Man as a Serpent.

All kinds of Serpents are referred to their place of habitation, which is either the earth, or the waters of the earth; and the Serpents of the earth are more in number than the Serpents of the water, except the Serpents of the Sea: And yet it is thought by the most learned *Rabbin*, that the Serpents of the Sea, are fishes in the likeness of Dragons. Now the places of Serpents abode being thus generally capitulated, we must enter into a farther narration of their habitations, and regions of their native breeding. In the first place, *India* nourisheth many and divers sorts of Serpents, especially the Kingdom of *Morissium*, and *Alexander* the Emperor, found among other Beasts, sundry kinds of Serpents in a long Desert, which is on the North-side of *India*. But all the Nations of the World may give place to *Ethiopia* for multitude and variety, for there they gather together in heaps, and lie in compass like round hills, visibly apparent to the eyes of them that behold them afar off. The like is said of all *Africa*, for in *Nimidia*, every year there are many men, women and children destroyed by Serpents. The Island *Pharus*, is also (by the testimony of the *Egyptians*) so filled with Serpents: The Coasts of *Ethiopia* are annoyed by Serpents; and the *Caspian* are annoyed by Serpents which come swimming in the floods, that men cannot sail that ways but in the

Mela.

Pliny.

Megasth.

Solinus.

Textor.

Strabo.

Aelianus.

Alistus.

Gellius.

Scaliger.

Cardan.

P. Fagius.

Ventur.

Hathornus.

Pierius.

Winter time. For from the beginning of the Spring, or equinoctial; they seem (for their number) to approach ravaging, like Troops and Armies. There are certain Islands called *Ophiis* in the *Aethiopia*, named after *Ophis* a Serpent, for the multitude bred therein: And there are Serpents in *Candy*, *Ephesus*, and all hot Countries: for this privilege hath GOD in nature given to the colder Countreys, that they are less annoyed with Serpents, and their Serpents also less nocent and hurtful: and therefore the Serpents of *Europe* are fewer in number, lesser in quantity, and more resistible for their weakness and strength.

There were a people in *Campania* called *Ophi*, because of the multitude of Serpents bred among them: Likewise there are great store in *Lombardy* and *Ferrara*. And whereas we have said, that *Scaliger* the most nocent and harmful Serpents are bred in the hottest Regions, where they engender more speedily, and also grow into greater proportions, yet it is not to be understood of any special property appertaining to them alone, for I read in *Olav Magnus* his description of the Northern Regions, of Serpents of as great quantity as in any other place of the world; but yet their poison is not half so venomous and hurtful, as in the hotter Regions, especially the *African* Serpents. In *Baiae* near *Livorno*, there are great store of great Serpents also, so that the Heard-men are at continual war and contention with them for defence of their flock: Likewise in the Mountains of *Helvetia* and *Auvergne*, whereof there are many wonders reported in the World, which I will not stand upon to relate in this place. We read also, that some places have been disinhabited, and dispeopled by Serpents, such were the people of *Syria*, called *Nemr*, who before the war of *Darius*, were constrained to forsake their soil, because they were annoyed, not only with home-bred Serpents, but also with many other which came from other parts: and so the Country remaineth desolate to this present day, the ancient Inhabitants being all removed to dwell among the *Budini*. The City *Ampile* in *Italy*, (as *M. Varro* writeth) was destroyed also by Serpents. And there be certain places of the World, which have received their denomination from Serpents, besides the *Ophiis* near *Cyrene*.

The Island *Tenor*, was called *Hydrussa* and *Ophiussa*, so were *Cremusos*, *Apolonia*, and the *Eupalides*. Mountains *Macroceramus*, *Rhodus*, and the long Islands *Ophiades* in the *Arabian* coast, which after it had remained along time desert, was purged and cleared from Serpents by the Kings of *Egypt*. *Nicomachus* also calleth *Cyprus*, *Ophiadia*. And in *Pausanias*, we read of a place named *Ophus* *Kephale*, in *Attica*, which divideth *Asunder* *Celebri*, and the Country *Tlamicia*. *Ephesus* nourisheth no Serpents, and the Earth thereof hath in it a secret vertue to drive away Serpents; wherefore it is much desired of all men to carry about them, for that it hath been often proved, that never any venomous beast durst adventure upon any man possessed thereof. The like is said of *Ireland*, as our own Chronicles do plentifully declare, and therefore I will spare to enter into any narration *Suetonius*.

To come therefore to the more particular abode of Serpents, especially of such as are known to us, we must leave off the talk and nomination of Kingdoms, and descend to dens, holes, caves, dungs, Sheep-coats, valleys, rocks hollow-walls and trees, woods, green pastures, hedges, and such like places, wherein they make their most abode: And now then in these Northern parts of the world (and yet seldom) they dive down into the bottom or roots of trees, especially such as are green all the Winter time: For they finde in them a greater heat or warmth, than in other, whole leaves fall off and decay in the cold weather, except in the roots of Birch. And by reason of their multitude gathered together at the root of this tree, it falleth out that their breath heateth the same, and so preferveth the leaves from falling off: Wherefore in ancient time, the ignorant multitude, seeing a Birch tree with green leaves in the Winter, did call it our *Ladies Tree*, or a holy tree, attributing that greenness to miracle, not knowing the former reason, or secret in Nature. *Solinus* reporteth of such a like Wood in a part of *Africa*, wherein in all the Winter time, the leaves of all the trees abide green, the cause is as before recited, for that the Serpents living at the roots of the trees in the earth, do heat them with their breath. Neither ought any man to wonder that they should so friendly live together, especially in the Winter and cold time, seeing that by experience in *England*, we know that for warmth they will creep into bed-draw, and about the legs of men in their sleep; as may appear by this succeeding discourse, of a true history done in *England*, in the house of a worshipful Gentleman, upon a servant of his, whom I could name if it were needful. He had a servant that grew very lame and feeble in his legs, and thinking that he could never be warm in his bed, did multiply his clothes, and covered himself more and more, but all in vain, till at length he was not able to go about, neither could any skill of Physician or Chirurgion finde out the cause.

It happened on a day as his Master leaned at his Parlour window, he saw a great Snake to slide along the house side, and to creep into the chamber of this lame man, then lying in his bed (as I remember), for he lay in a low chamber, directly against the Parlour window aforesaid. The Gentleman desirous to see the issue, and what the Snake would do in the chamber, followed, and looked into the chamber by the window; where he espied the Snake to slide up into the bed-draw, by some way open in the bottom of the bed, which was of old boards. Straightway his heart rising gotake their Rapiers and kill the said Snake. The serving men came first and removed the lame man (as I remember) and then the one of them turned up the bed, and the other two the draw, their

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master











Eagle with her long body, that she was nearer *ad pervendum quam ad pendendum*, that is, to be killed, then to kill, or get a prey. The Man beholding the sight, with his sickle cut asunder the Serpent, and so delivered the Eagle: but how the Eagle required the Man, shall be shewed in the history of the Eagle.

In the Mountains of *Morsium*, there are great store of great Serpents, which are very dangerous, but there are also great white Eagles, which do eat and destroy them. Some say that the Vulture doth destroy Serpents, but herein I cannot be satisfied, for all Eagles do not hunt after this game, but only the lesser sort of them. Eagles when they build their nest to breed in, they seek out a certain stone called *Attiler*, the virtue whereof keepeth Serpents from their young, and also make their eggs fruitful, so as it is a very rare thing for Eagles to have a rotten egg.

All kinds of great Hawks, Buzzards and Kites, are also enemies to Serpents, Snakes, and Adders, and the Kites will eat them, if they finde them alive or dead, as I my self have often seen by experience. The Storks also do hunt after Serpents, wherefore in *Thebes*, it is at unlawful to kill a Stork as to kill a Man; for they have many devices to catch Serpents, and all venomous Beasts, and thereof to eat without harming themselves: and not only eat themselves, but give thereof to their young ones, as *Juvenal* witnesseth:

—*Serpente ciconia pullos*  
*Nutrit, & inventa per deula rura lacerta.*

In English thus;  
The Stork her young ones, according to kinde,  
In Serpents and Lizards, do their meat finde.

Sometimetime they fight together irefully, and the Serpent strangeth the Stork by twining about her neck; again, the Stork killeth the Serpent by pecking upon her head, and so sometimes they are both found dead together. As the Eagle hath the stone *Attiler*, so hath the Stork *Lid-niter*, to defend herself and her young ones from the rage of Serpents. There is (as *Oppianus* writeth in his *Iacenticus*) this vulgar story in *Italy*. There was a certain Serpent, which came two years together to the nests of divers Storks, and destroyed their young ones, neither could all the Storks make sufficient force against her with all their might to save their brood. The third year the Serpent came again to attempt the like slaughter; but there among the Storks the found a certain strange Bird never seen before, being shorter than the Storks, and yet had a great long sharp bill, as sharp as the point of any sword. This Bird (as it seemeth) was brought thither by the Storks to guard their young ones, when the Parents were gone abroad to forrage for them. Then, alson as the young ones were hatcht, out cometh the Serpent from his hole, and beeginneth to assail the nests of the Storks, but the guardian Bird, (according to the trust committed to her) resisted the Serpent, and pecked at her mortally with her sharp beak. The Serpent to end his adversary, nimble advanced himself upright, and endeavoured to reach the Bird, but the wary Bird soared so high above his reach, that the langrel Serpent could not catch him, and so they continued in fight, till at last the Bird killed the Serpent, after that the Serpent had once only fattened his venomous teeth upon the Bird, which afterward so wrought upon this Bird, that all her feathers did flie off from her back.

But of all other Fowls enemies to Serpents, there is none greater or more deadly, than the Bird called *Ibis*, which the *Egyptians* do wonderfully honour; for when swarms of Serpents come into *Egypt*, out of the *Arabian* gulfs and fens, these Birds meet and destroy them: and there is such an admirable fear in Serpents of these Birds, that they do not only tremble, and fall senseless at their sight, but also at the sight of their feathers: they do harm to no other living thing, except *Locusts* and Caterpillars, wherefore they are worthily nourished, and called *Intima* & *populares* Serpentes, enemies and destroyers of Serpents.

All kinde of Pullen, as Cocks and Hens, are likewise enemies to the brood of Serpents. And a good courageous Cock, (as *Columnella* saith) is able to kill and resist a Serpent. For, (as *Randolletius* saith) he hath found in the crop or craw of Pullen, young Serpents devoured by them. But from whence *Albertus* had his relation, that a Hen cannot be hurt that day by a Serpent wherein she layeth an Egg, I cannot tell, and therefore leave it to the Reader to believe or refuse.

And it is also said, that the flesh of Hens applied to the bitings of Serpents, doth cure them, or else cause a Hen to sit upon the wounded place; but if the Beast which is wounded, be a Cow with Calf, or any such other femal with young, howsoever it fareth with the old one, surely the young ones shall perish.

There is also another Bird, which for his combating with Serpents, is termed *Ophiomachus* a fighter with Serpents. Although *Ctesius* be of opinion, that *Ophiomachus* never signifieth a Bird. Of this Bird the *Septuaginta* make mention, *Levit. 11.* but many of the better learned, do interpret it for a Lizard, or a Locust, or an Ichneumon. The Peacock also is a terror to Serpents, so as they will not abide within the hearing of his voyce, for it is perpetual with all venomous beasts. And the Vulture, as we said before, is a terror unto them, inasmuch as one of their feathers burned will by the favour of the smook drive away the Serpent. And to conclude, the Swallows also are at variance with the Serpents brood, for the Snake will creep up to the Swallows nest, and therein suddenly surprize the young, for the old ones will fly away chattering, and chirping in mournful sort, not

being able to hinder or resist their chick-devouring foes. But at the last, when they see all their young ones dispatched, as if they could not endure to live for, or grow, or else thinking it possible to fly into the snakes belly to fetch out again their devoured young ones, they fall down upon their enemies jaws, doing what they can to make them devour and swallow them up also. And thus *Oppianus*, much for the hatred betwixt fowls and Serpents: Wherein, although they kill the Serpent, either in their own defence, or else for raven and prey, yet may we admire the prudence of the most mighty Creator, who hath so disposed of his power, that he causeth the Fowls of Heaven to revenge Mankind upon the Serpents of the earth, by whose subtilty Man was plucked from Heaven, and they made subject to corruption.

In the next place, God hath also framed an opposition betwixt Serpents, and the Beasts of the earth and water, which live with Serpents in the same Elements that so they might be both annoyed at home and abroad. I will therefore begin with the Dog, who is a notable enemy to the Serpents, as I my self have seen many in *England*, for he will earnestly seek them out with nose and foot, both in waters, dungs, and hedges, and when he hath found any one, he will suddenly snatch him into his mouth, biting him about the middle, and so holding it in equal payse, will sting and shake it about his ears very fast and violently, till he perceives it can stir no more, and then suddenly again letteth it fall out of his mouth to the earth; but if it begin to stir, he snatcheth it up again, and shaketh it about his ears as before, and so never giveth over till it appear dead: but they seldom kill them, only they astonish them, and so may a young child knock out their brains. Howbeit, when they fight in defence of their Masters, then they kill them, by biting them in pieces. And yet is it more safe for them, to astonish them, and leave them for dead, by shaking them about their ears, then by biting them in pieces, for that commonly then, while they share them aunder, they are hung or bitten by the Serpent. And this I have often in mine own experience. But one of the greatest enemies of Serpents are Harts, a timorous beast of all other, and yet greedy to combat with the Serpent, wherefore I will briefly describe this their war and hatred, out of *Solinus*, *Helianus*, *Plinarch*, and *Oppianus*.

The Hart will greedily follow out the path of the Serpent, and finding it lodged in his den or hole, by the virtue of his nose draweth it out of the Earth, and thereof some have derived *Elephas*, a Hart, of *Elemeine* *iou ophis*, that is, driving away of Serpents. And herein I think it not reason to follow the opinion of *Helianus*, who intreating of Harts drawing Serpents out of the earth, saith, that the Serpent is inticed and allured out of her hole, by the breath of the Hart, as by a Philre or Cup of love; for seeing that there is so great an hostility, and antipathy in nature, betwixt their whole disposition, how can it come from any secret sympathy, that the Serpent (which is the subtillest of all beasts) should be bewitched with the love of his enemies breath? But if it be said that Serpents, which are by nature very cold, can easily be drawn forth by a warmer breath, as it were by the sweet beams of the hot Sun; how then falleth it not removed? that when any other Beast breatheth upon their lodging, and into their dens, they are not moved? But let it be granted that the warmels of the Harts breath, maketh him for fake his denyet it cannot be ascribed to any secret nature, as if there were a fire of love in the Harts throat or bones, but only from the natural concomitant quality of heat, with expiration, respiration, and inspiration: and therefore I cannot but conclude, that there is not any possibility or probability in nature, that where the spirits, which take and make the breath, are at such variance, there the breath proceeding from the one adversary, should so intchant and beguile the other.

But the true cause of this extraction of Serpents out of their lodgings, is, as I conjecture, not her warm breath that allureth, nor yet scorseth and burneth her adversary; but that when the Hart hath found the den of the Serpent, by her violent attraction of the air out from the Serpent, she enforceth it for the safeguard of life to follow it out of the den. As when a vessel is broched, or vented, the Wine followeth the flying air; or as a Cupping-glass draweth blood out of a scarified place of the body: and so is a Serpent against her will, drawn to follow the breath of her destroyer. *Oribasius* and *Galerius* do subscribe unto this opinion, and take it for most consonant to reason and truth, and therefore I will not follow it any further: for by the self same manner do the Sea-Rams draw the Sea-calls out of their lodgings among the Rocks under the earth, for when they have found the Calf, they keep it from air, and prevent their refrigeration.

When the Serpent seeth himself so drawn forth by his adversary, he being above measure incensed to rage, flyeth away, and maketh his poyson more noisome, violent and powerful, for which cause, there was wont to be a Proverbial caveat or warning: *Cave ne incidaris in Serpentem, quoniam extrahit a latris ambellu cervi effugit, tum enim propter iracundiam vehementius ei venum misit.* Take heed lest you meet with a Serpent flying away from the Hart, after she is drawn out of her den by her breath, for then, by reason of her rage, her poyson is more forcible. But I will proceed to the more strange and wonderful combat betwixt Serpents and Harts. For when the Serpent perceiveth the unavoidable danger, and that she must needs fight for her life, she hisseth strongly, lifting up her head from the earth, even to the throat of the Hart, and thereat catcheth and gnaweth with her teeth; but on the other side, the valiant Hart, (if such a word may be given to a fearful Beast) as it were deriding his adversaries weak endeavours to harm, suffereth the Serpent to wind about his break and belly, and to embrace both neck and legs with his long and weak body, that so he may have the more power upon it, for he teareth it into an hundred pieces.



But the most strange combats are betwixt the Harts and Serpents of *Lybia*, where hatred hath his deepest footing, for there the Serpents watch the Hart when he lyeth down to sleep upon the ground, and being a multitude of them set upon him all together, fastning their poysonfull teeth in every part of his skin, some on his neck and breasts, some on his sides and back, some on his legs, and some hanging upon his privy parts, biting him with mortall rage, to end and overthrow him. The poor Hart being thus oppressed with multitude, and assailed without any warning to the battle, in vain attempteth to run away, for their cold earthy bodies, winding tails, and pinching teeth, hinder his wonted pace, and overcharge his strength: whereat being forced to quit himself in the best manner he can, enraged, with teeth, feet, and horns assailing his enemies, whose spears and arrows of teeth and fangs, stick so fast in his body; tearing them in pieces which he can touch with his teeth, beating others asunder where he can reach them with his horns, and trampling under his feet those which cleave to his lower parts: and yet such is the rage and dauntlesse courage, or rather hatred of these enemies, not willing to die alone, (but like Champions to end their lives upon and with their adversary) do still hold fast, and even when their bodies are beaten in pieces, their heads stick close, and hang sharp upon the Harts skin, as though they would grow with him, and never fall off till he should also fall down dead. But the Hart feeling some ease, and having by the slaughter of their bodies delivered his feet from thralldom, by a divine naturall instinct, flyeth and runneth fast to some adjoining fountain, where he seeketh for Sea-crabs, whereof he maketh a medicine, that shaketh off their heads which cleave so fast unto him, and also cureth all their wounds and poyson. This valiant courage is in Harts against Serpents, never yielding, trying, or giving over, and yet otherwise, are afraid of Hares and Conies by nature.

But what is the cause of this hostility betwixt Harts and Serpents? Is it for meat, or for medicine and cure? Surely they would abhorre to eat them, if it were not for health and naturall medicine, for sometimes the pores of their body are dulled and shut up, sometimes the worms of their belly do ascend up into the roof of their mouths while they chew the cud, and therewith fast; for remedy whereof, the Hart thus afflicted, runneth about to seek for Serpents, for the eating of a Serpent cureth this malady. *Pliny* saith, that when the Hart waxeth old, and perceiveth that his strength decayeth, hair changeth, and his body begins to be feeble, then for the renewing of his strength, he first devoureth a Serpent, and afterward runneth to some fountain of water, whereof when he hath drunk, he findeth a sensible alteration, both in horn, hair, and whole body. And this thing is also delivered by the Writer of the Gloss upon the 42. Psalm, which beginneth, *Like as the Hart desireth the water springs, so longeth my soul after my GOD.* But for the ending of this question, we must consider and remember, that there are two kinds of Harts, one eateth Serpents, and feeling the poyson to work, straight-way by drinking casteth up the poyson again, or else cureth himself by covering all his body over in water. The other kinde only by nature killeth a Serpent, but after victory forbeareth to eat it, and returneth again to feed in the mountains. And thus much for the discord betwixt Harts and Serpents.

In the next place, great is the variance betwixt Serpents, Dragons, and Elephants, whereof *Pliny* and *Solinus* write as followeth. When the Elephants called Serpent-killers, meet with the Dragons, they easily tread them in pieces, and overcome them, wherefore the Dragons and greater Serpents use subtilty in stead of might; for when they have found the path, and common way of an Elephant, they make such devices therein to intrap him, as a man would think they had the device of men to help them, for with their tails they so ensnare the way, that when the beast cometh, they intangle his legs as it were in knots of ropes; now when the beast flooeth down with his trunk to looke and untie them, one of them suddenly thrusteth his poysoned head into his trunk, whereby he is strangled. The other also (for there are ever many which lie in ambush) set upon his face, biting out his eyes, and some at his tender belly; some winding themselves like unto his throat, and all of them together, sting, bite, tear, vex, and hang upon him, untill the poor beast, emptied of his blood, and swollen with poyson in every part, fall down dead upon his adversaries, and so by his death kill them at his fall and overthrow, whom he could not overcome being alive. And whereas Elephants (for the most part) go together in flocks and troops, the subtil Serpents do let passe the foremost of every rank, and set only upon the hindmost, that so one of the Elephants may not help another; and these Serpents are said to be thirty yards long.

Likewise, forasmuch as these Dragons know, that the Elephants come and feed upon the leaves of trees, their manner is to convey themselves into the trees, and lie hid among the boughs, covering their foreparts with leaves, and letting their hinder parts hang down, like dead parts and members; and when the Elephant cometh to browse upon the tree-tops, then suddenly they leap into his face, and pull out his eyes, and because that revenge doth not satisfie her, thirsting only after death, she twineth her gable-long body about his neck, and so strangeth him.

It is reported that the blood of Elephants is the coldest blood in the world, and that the Dragons in the scorching heat of Summer, cannot get any thing to cool them except this blood; for which cause they hide themselves in Rivers and Brooks, whither the Elephants come to drink, and when he putteth down his trunk they take hold thereof, and instantly in great numbers leap up into his ears, which only of all his upper parts are most naked and unarmed, out of which they suck his blood, never giving over their hold till he fall down dead, and so in the fall kill them which were the procurers of his death. So that his and their blood is mingled both together, whereof

*Helianus.*

whereof the Ancients made their Cinnabaris, which was the best thing in the World to represent blood in painting: Neither can any devise or art of man ever come neer it; and beside, it hath in it a rare vertue against poyson. And thus much for the enmity betwixt Serpents and Elephants.

The Cat also by *Alberus* is said to be an enemy to Serpents, for he saith he will kill them, but not eat thereof; howbeit, in her killing of them, except she drink incontinently, she dyeth by poyson. This relation of *Alberus* cannot agree with the Monks of *Mesara* their relation about their Abby-cat. But it may be that *Alberus* speaketh of wilde-cats in the Woods and Mountains, who may in ravin for their prey kill a Serpent, which followeth with them the same common game.

The Roes or Roe-bucks do also kill Serpents, and the Hedge-hog is enemy unto them, for sometimes they meet both together in one hole, and then at the sight of the Serpent, the Hedge-hog foldeth himself up round, so as nothing appeareth outwardly, save only his prickles and sharp bristles: the angry Serpent setteth upon him, and bitech him with all her force; the other again, stealeth herself above measure, to annoy the Serpents teeth, face, eyes, and whole body: and thus when they meet, they lie together afflicting one another, till one or both of them fall down dead in the place. For sometime the Serpent killeth the Hedge-hog, and sometime the Hedge-hog killeth the Serpent, so that many times he carrieth away the Serpents flesh and skin upon her back.

The Weasels also fight with Serpents with the like successe; the cause is, for that one and other of them live upon juyce, and so for their prey or booty, they fall together in mortall warre. Herein the Weasel is too cunning for the Serpent, because, before the sighteth, she seeketh Rue, and beating thereof quickly discomfortheth her adversary. But some say, that she eateth Rue afterward, to the intent to avoyd all the poyson she contracted in the combat.

The Lyon also and the Serpent are at variance, for his rusling mane is discouraged by the extoll'd head of the Serpent to his breast. And therefore as *S. Ambrose* saith, this is an admirable thing, that the Snake should run away from the Hart, the most fearfull of all other beasts, and yet overcome the Lyon, King of all the retinue.

The *Ichneumon* or *Pharos* Moule is an enemy to Serpents and eateth them, and because he is too feeble to deal with a Snake alone, therefore when he hath found one, he goeth and calleth as many of his fellows as he can finde, and so when they find themselves strong enough in company, they set upon their prey, and eat it together; for which cause when the *Egyptians* will signifie weaknesse, and they will not endure near those places where they hear their voice. The *Sorex* and Swine, do also hate and abhor Serpents, and the little *Sorex* hath most advantage against them in the Winter-time, when they are at the weakest. To conclude, the Horse is wonderfully afraid of all kindes of Serpents if he see them, and will not go over, but rather leap over a dead Snake. And thus I will end the warre betwixt Serpents and Four-footed beasts and Fowls.

Now left their curie should not be hard enough unto them, God hath also ordained one of them to destroy another, and therefore now it followeth to shew in a word the mutuall discord betwixt themselves. The Spider, (although a venomous creature,) yet is it an enemy to the Serpent; for when the seeth a Serpent lie under her tree in the shadow, she weaveth or twisteth a shred down from her web upon the head of the Serpent, and suddenly bitech into his head a mortal wound, so that he can do nothing but only roll to and fro, being stricken with a Megrim, whereby he hath not so much power as to break the Spiders thread hanging over his head, untill he be dead and overthrowen. The Cockatrice is such an enemy to some kinde of Serpents, that he killeth them with his breath or hissing.

The Lizard a kinde of Serpent is most friendly to man, and very irefull against Serpents, to the uttermost of his power, whereof *Erasmus* (in his book of Friendship) telleth this story: I saw (saith he) one day, a very great Lizard fighting with a Serpent in the very mouth of a Cave, at the first sight whereof I marvelled at the matter, for the Serpent was not visible out of the earth: there was with me an *Italian*, who said, that surely the Lizard had some enemy within the Cave. After a little while the Lizard came unto us, and shewed us his side all wounded, as it were craving help, for the Serpent had bitten him fore, for of green he made him appear red, and this Lizard did suffer himself to be touched of us. Thus saith *Erasmus*.

Again, in the same place he saith, that when a Lizard saw a Serpent lyie in wait to set upon a man being asleep, the Lizard ran to the man, and never ceased running upon the mans face; scratching his neck and face gently with his claws, untill he had awaked the man, and so discovered him his great danger. The Locust also fighteth with a Serpent, and killeth him when he is lust, for he getteth hold with his teeth upon his lower clasp, and so destroyeth him; but this is not to be understood of every kinde of Locust, but only of one kinde, which for this cause is called *Ophiomachus* genus.

The Serpent is also an enemy to the Chamaleon, for in the extremity of famine, the setteth upon them, and except the Chamaleon can cover herself from his rage, he hath no defence but death. *Alberus* calleth a certain Worm, *Spilator colubri*, because (as he saith) it will take fast hold upon a Serpents neck underneath his jawes, and never give over till he hath wearied and destroyed his adversary. The Tortoises are enemies to Serpents, and will fight with them, but before they enter combat, they arm themselves with wilde Marjoram or Pentrioyall.

*Aristotle.  
Perottus.  
Isidorus.  
Helianus.**Belonius.  
Cru.**Erasmi.**Helianus.*

*Thrasillus.*  
*Pliny.*  
*Ælianus.*

But there is not any thing in the world that fighteth more earnestly against Serpents then Sea-crabs and Crevilles; for when the Sun is in Cancer; Serpents are naturally tormented with pains and feavers, and therefore if Swine be hung or bitten with Serpents, they cure themselves by eating of Sea-crabs. There is a great water near *Ephesus*, at the one side whereof there is a Cave full of many noyome and irefull Serpents, whose bitings by often probation have been very deadly both to men and beasts. These Serpents do often times endeavour to crawl over the pool; now on the one side, there are great hore of Crabs, who when they see the Serpents come crawling or swimming, they instantly put out their crooked legs, and as it were with tonges or pinfers, reach at the sliding Serpent, wherewithall the Serpents are so deterred, that through their sight, and often remembrance of their unhappy successe with them, they turn back again, and never dare any more adventure to the other side. Where we may see the most wize providence of the Creator, who hath fit Sea-crabs the enemies of Serpents, to guard both men and Cattell, which are on the opposite side: for otherwise, the inhabitants would all perish, or else be drove away from their dwellings. To conclude, not only living Creatures; but also some kinde of earth, and Plants are enemies to Serpents: And therefore most famous are *Ephesus* and *Creet*, as some say, although *Belonius* say, that there are *Scolopendres* Vipers, and Slow-worms in *Creet*; yet he saith they are without venom: and there are very few in *England* and *Slow*, but none at all in *Ireland*, neither will they live if they be brought in thither from any other Country. This antipathy with Serpents, proceedeth from living to dead and vegetable things, as trees, herbs, and plants, as may be seen by this discourse following.

There is such vertue in the Ash-tree, that no Serpent will endure to come neer either the morning or evening shadow of it, yea though very far distant from them, they do so deadly hate it. We let down nothing but that we have found true by experience: If a great fire be made, and the same fire encircled round with Ashen boughs, and a Serpent put betwixt the fire and the Ashen boughs, the Serpent will sooner run into the fire, than come neer the Ashen boughs: Thus saith *Pliny*; *Olant Magnus* saith, that those Northern Countreys which have great store of Ash-trees, do want venomous beasts, of which opinion is also *Pliny*. *Callimachus* saith, there is a Tree growing in the land of *Traebinta*, called *Smilo*, to which if any Serpents do either come neer or touch, they forthwith die. *Demeritis* is of opinion, that any Serpent will die if you cast Oken-leaves upon him. *Pliny* is of opinion, that *Alciadum*, which is a kinde of wilde Buglosse, is of the same use and quality; and further, being chewed, if it be spit upon any Serpent, that it cannot possibly live. In time of those solemne Feasts which the *Athenians* dedicated to the Goddess *Ceres*, their women did use to lay and shew their beds, with the leaves of the Plant called *Agnus*, because Serpents could not endure it, and because they imagined it kept them chaste, whereupon they thought the name was given it. The herb called *Rosemary*, is terrible to Serpents.

The Egyptians do give it out, that *Polymatha*, the wife of *Thorris* their King, taking pity upon *Helen*, caused her to be fet on shore in the Iland of *Pharus*; and bewetted upon her as heath (whereof there was plenty) that was a great enemy to Serpents; whereof the Serpents having a feeling sense (as they say) and so readily known of them, they straightwayes got them to their lurking holes in the earth: and *Helen* planted this herb, who coming to the knowledge thereof, she perceived that in his due time bore a seed that was a great enemy to Serpents, and thereupon was called *Helenium*, as they that are skillfull in Plants affirm; and it groweth plentifully in *Lybia*, which is a little Ile against the mouth of *Nilus*, joyned to *Alexandria* with a Bridge. Rue, (called of some Herb of grace) especially that which groweth in *Lybia*, is but a back friend to Serpents, for it is molfe dry, and therefore causing Serpents fone to faint and lose their courage, because (as *Simacus* affirmeth) it induceth a kinde of heavinesse or drunkennesse in their head, with a vertiginous or giddinells, through the excess of his drinels, or immoderate siccity. Serpents cannot endure the favour of Rue, and therefore a Weasel when she is to fight with any Serpent, eateth Rue, as doth the fenative against her enemy, as *Aristotle*, and *Pliny* his Interpreter are of opinion.

The Country-people leaving their Vessels of Milk abroad in the open fields, do belmeare then round about with Garlick, for fear lest some venomous Serpents should creep into them, but the smell of Garlick, as *Erasmus* faith, driveth them away. No Serpents were ever yet seen to touch the herb *Trifolie*, or Three-leaved graffe, as *Aedonius* would make us believe. And *Carden* the Physician hath observed as much, that neither Serpents nor any thing that is venomous, will lodge, dwell, nor lurk privily neer unto *Trifolie*, because that it is their bane, as they are to other living Creatures: and therefore it is low to very good purpose, and planted in very hot Countries, where there is most flore of such venomous Creatures. *Arnoldus Villanovus* faith, that the herb called *Drocoata* killeth Serpents. And *Florentinus* affirmeth, that if you plant Wormwood, Mugwort, and Soterneswood about your dwelling, that no venomous Serpents will ever come neere, or dare enterprize to invade the same. No Serpent is found in Vines when they flourish, bearing flowers or blossoms, for they abhor the smell, as *Aristotle* faith. *Avicen* an Arabian Physician, faith, that Caspers doe kill Worms in the guts, and likewise Serpents. If you make a round circle with the herb Betony, therein include any Serpents; they will kill themselves in the place rather than strive to get away. *Galbanum* killeth Serpents only by touching, if Oyl and the herb called Fennel-giant be mixt withall. There is a shrub called *Theriacata*, having a flower like a Rose, which killeth Serpents heavy, dull, and drowfie, and so killeth them, as *Pliny* affirmeth.

Albertus and Kyranider affirm, that there is a certain Tree in *Africa*, called *Hyperlocus*, which soundeth as much as *Against the right hand*, with whose sweet fruit *Doyes* are delighted; but there are *Serpents* which are fore enemies to the *Doyes*. In lying in wait for them, and not being able to abide the smell & shadow of the tree, the *Doyes* notwithstanding very lately do therein in the tree seek their refuge, and finde food wherewith to sustain themselves. *Agass* (who practiced *Physick* one hundred years) affirmeth, that if any man can melt *Sol. Almonack* in his mouth, and then spit it into a Serpents mouth, that he will die of it.

*Of the Medicines made and taken out of SERPENTS.*

It is manifest, that if any man be wounded of a Serpent, though the wound seem incurable, that Remedies to be  
the bowels or inward parts of the same Serpent, being applied to the wound, will cure the bad and taken  
time; and those that have eaten the liver of a boyed Viper at any time, shall never after be from Serpents.  
wounded of any Serpent. Neither is a Snake venomous, unless at some times of the Moon; when  
she is thoroughly moved or angered. And a live Snake or Serpent being caught, if the bitten place  
be bathed, foked, or washed with the Snake being bruised in any water, it is of notable effect.  
Besides, they are thought to be very sovereign against many infirmities, and therefore (as *Pliny*  
saith) they are dedicated to *Esculapine*.

Avien faith, that if any be troubled with the Leprosie, he is to be cured by taking a black Serp-  
pent, being excoiated, he must be buryed so long till there breed Worms of him, and then  
he is to take forth of the earth and dried, and so to be given to the leprous person for three  
days together, the quantity of one dram at every time, with Syrup of Hony. *Pliny*, and then  
him agreeeth *Cornelius Celsus*, affirmeth, that if any one do eat the middle part of Snakes or Ser-  
pents, eating away the heads and tayls, they cure *Strumes*, which we in English call the Kings-evil.  
There is a disease called *Ephemiasia*, or *Elephantiasis*, which is a kinde of Lepry proceeding of  
Lancholy, choler, and Regime, exceedingly aduitt, and maketh the skin rough, of colour like an Ele-  
phant, with black wannish spots, and dry parched scales and scurf: This disease (I say) so grievous,  
and *Strumes* are exceedingly holpen by eating often of Vipers and Serpents, as *John Targani* in his  
first Book *hystitit*. Chirurg. hath assured us.

Play faith, that if you take out the right eye of a Serpent, and so binde it about any part of you, that it is of great force against the watering or dropping of the eyes, by means of a rheum issuing out thereat, if the Serpent be again let go alive. And so he saith, that a Serpents or Snakes heart, if either it be bitten or tyed to any part of you, that it is a present remedy for the toothache; and he addeth further, that if any man do taste of the Snakes heart, that he shall never after be hurt of any Serpent.

*Pennis Venetus* in his second Book, Chap. 40. writeth, how that in the Province of *Catalam*, there is Serpents of exceeding greatneſſe, which being killed, the inhabitants of the Countrey do pull out their gall, which they uſe to prize at a very high rate when they ſell any of it, for it is very medicinal; ſo that they which are bit of a mad Dog, if they take inwardly in any drink but the quantity of a penny weight of this gall, they are preſently cured. And if a woman be in travail of child-birth, if the taſte never ſo little of this gall, the birth will be the more ſpeedy. So if any be troubled either with the Pyles, or Hemorrhoids in the fundament, if that the place be anoynted with this gall, after a few dayes he is ſet free from his diſeaſe. *Hippocrates* giveth the feed of Serpents as a remedy againſt the ſuffocation of the belly.

As a remedy against the luffocation of the belly.

*Nictulua Myrsifus* prefcribeth this medicine againſt ſtrains and hardneſſes. Take a dead Serpent and put him into a new pot, luting it very well with *Gypſum*, then ſet it in a furnace that it may be burnt, after that, commix the aſhes of a Serpent with an equal portion of the feeds of Fenugreek, ſo being wrought up with *Altick* Honey, and thoroughly digell'd, anoynt the places affected. And with him agreeeth *Pliny*, who expreſſly affirmeth, that the aſhes of Snakes and Serpents, being anoynted upon *Strumles*, either with Oyl or Waxe, is a ſingular medicine. And likewiſe to drink the aſhes of a Serpent that is burnt to powder in a new earthen pot, is very good: made with Carr-wheels. The aſhes of a Serpent burnt with ſalt in a pot, being put with Oyl of Roſes into the contrary ear, helpeth the tooth-ache.

An ungent against the Morpue, preferred by *Olus Magnus*. Take of the ashes of a Serpent burnt in a new pot, and well covered, two ounces, *Lytharge*, *Galbanum*, *Ammoniacum*, and *Opponax*, dissolved in Vinegar, three ounces, boyl them untill the Vinegar be consumed, then strain them, putting to them of Turpentine three ounce, Frankincense, Maltick, and Sarcocolla three ounces, Saffron two ounces, working them with a Spatuler till they be cold. The powder of a burnt Serpent, likewise good against Fistulas. The fat of a Snake or Serpent mixt with Oylis good against Strumes, as *Pliny* saith. The fat of Snakes mixt with Verdegrease, healeth the parts about the eyes that have any rupture. To which agreeeth the Poet, when he saith :

Anguibus ereptos adipēs ærugine misce,  
Hi poterant ruptas oculorum jungere partes.

Which may be thus Englished;  
The fat of Snakes mingled with Iron rust,  
The parts of eyes doth mend, which erst were burst.



Of the way to drive away Serpents. Of their poyson and bitings.

A certain and sure way to cure those who either have been poysoned, inuened, or bitten by them.

Suffumigations  
to expell Ser-  
pents.

To expell and drive farre away any venomous Creatures, we use to make fumigations of the Root of Lillies, Harts-horn, and the horns and hoofs of such beasts as be cloven footed: likewise of Bay-leaves and berries: Calamint, Water-cresses, and the ashes of the Pine-tree. The leaves of Vitex, Bitumen, Castoreum, Melanibium, Goats-horns, Cardamomum, Galbanum, Propolis, which may be called Bee-glew, the herb called Horrtange, Panax, Opopanum, Fleabane, the shavings or scrapings of the Cypress or Cedar-tree being steeped in Oyl, the Jet-stone, *Serpentum*, the herb or called Poley, Fern, and all other things that have a strong or vehement ill favour, being cast on the coals for a fumigation, do with their vapour chase away venomous beasts. For whereas all venomous Creatures have the passages or pores of their bodies very straight and narrow, they are very easily filled and stuffed, and are quickly stopped and suffocated by such like fents and smells. Asium in his thirteenth Book setteth down an excellent fume after this manner. Take of Galbanum, of Sandracca, Butter, and of Goats-fat, of every one alike much, make them into Pills, and use them for a fumigation. Nicander in *Iberiacis* setteth down some for the same intention, in these Verles.

*Cervinusque gravi cornu nidore fugabis:  
Et sic cum accendens Gageas quatuordecim lapillum,  
Quem consumens non exedit impetus ignis:  
Multifidam silecem crepitantibus injicis flammis,  
Aut imas viridis libanotis accipe stiracem,  
Tantundemque acris nascetur: his juncos duobus  
Equali caprea jam jellum pondere cornu.*

In English thus;

By Hart-horn fume do Serpents slide away  
When stone Gageas burning's put thereto:  
Which heat of fire doth not clean destroy:  
Then mix' those flames cast many-leaved Fern also.  
Of green hugg-fennel, take the lowest branches,  
Of Nigelswort sharp, in much: then to them join  
A like proportion of Roes horn in weight and kenticus.

*Aut excoctantem naves cerebrumque nigellam,  
Interdum Sulphur, sedum quodque Bitumen,  
Ut sumpta aequali pendantur singula parti,  
Præterea graveolens candentibus indite prunis  
Galbana, & ignitum faciens urtica dulcem,  
Dentatque cedrum maxillæ scille lignum,  
Omnibus insitum Serpentibus esset odore.*

Or else Nigella, drying rose and brain,  
Or Brimstone, called filthy Sulphure,  
So all be equal in weight and parts to one.  
Besides, Galbanum rank, laid on burning coals,  
Or nettles, which do cause watery pain,  
And Cedar cut, all burn'd be Serpents biles,  
Them overcome, and make them slide away.

The breath or vapour that issueth from Serpents is so pestilent, that it killeth all young children, as Columella saith; and for preventing of this mischief, it is good to burn Harts-horn, Womens hair, or Galbanum.

*Vix & mixtisq; oculum perficere odores,  
Accensis quibus arceat terribilis Serpens,  
Aut Styraem uras, aut atri vulturis alas,  
Vel Nepetam aut frondem rigida stirpique myrica.*

In English thus;

If thou wouldst learn what odours for thy skill  
Were best to scare the Serpent fierce away,  
Burn Styrae, or black Vultures winged quill,  
Or Neppe, green leaves, or stick of Tamarisk assay.

And Pliny and Sextus agreeing with him, do say; that if you burn the feathers of a Vultur, all Serpents will quickly avoid the strong sent thereof. There is a certain River in the Countrey of Media and Ponia, (as Aristotle testifieth) wherein there is a stone found, with whose fume Serpents are chased away: whose property is such, that if any man cast water on it, it will burn, and burning, if with any Fan you go about to make it to flame, it is straightway quenched; and thus being extinguished, it sendeth forth a favour stronger then any Brimstone. And to this subscribeth Nicander in these words.

*Vel in Threictum flamma succende lapillum,  
Quilicet irriguæ mersus tamen ardet in undis,  
Expressaque stent: resinguntur undis olivæ.*

In English thus;

Or take the Thracian stone, which set on fire  
Will burn in water, yet quenched is with Oyl.  
This cast from Pontus shore, Heard-men desire,  
The better to feed their flocks, and Serpents soyle.

*Hanc quem stultifoni mittunt de littera Poni,  
Qui, rude vulgus, his vescentes carne magistri  
Pascendi pecorie sua post arma sequuntur.*

The powder of a Cedar tree, putteth to flight venomous Serpents, as Virgil in the third of his Georgicks witnesseth.

*Disce & odoratum stabulis accendere cedrum,  
Galbanoque agitare graves nidore chelydros.*

Which may be Englished thus;

Learn how of Cedar, fire in thy folds to make,  
And with Galbanum's favour, put to flight the Snake.

Things that are strowed or laid under us, both in our houses and in high-ways or beds, will like-wild defend and keep us from venomous creatures: as for example; Southernwood, Dictander, Fleabane, Calamint, Gentian, *Hajula regia*, Sage, Nightshade, S. Johns wort, called of some *Fuga demonum*; Marjoram, Origan, wilde Rue, wilde Thyme, Bay-leaves, the shavings or tops of the Cypress, or Cedar-tree, Cardamomum, Pennyroyal, Wormwood, Mugwort, *Lysimachia*, called in English Loose-strife, and Rosemary. And if we cannot lie upon such a bed;

Of such things  
as are laid un-  
der us, that  
will expell Ser-  
pents.

*Tunc juncta virides sinuosi vorticis alveæ,  
Amicolam nepetam per obesos collige ripas.  
Aut ibi casta salix, pulchro que flore renidet,  
Præstat inftrata securum fronde grabatum.  
Sic quoque montanum polium, cuius grave spirans  
Hæret odor, nuncque juncum qua debet ecclidina  
Hirba, & ab Euxina que fertur origanum urbe,  
Quæcumque illarum decerpitur obvia, prodest.  
Quin etiam multo per aprica ocumina flore*

In English thus;

Then by the winding banks of crooked streams  
The Wren-wep take up, which under-foot is tread,  
Or the shell Ofier, whose fair flower bath beans  
And leaves, secure from Serpents make thy bed.  
The Mountain Poley, whose strong smelling breath  
Tethers abhor, & that which doth the hydra name,  
The Origan which cometh from Euxinus earth,  
Despite all gainst Serpent, if you bear the same.

*Ridens abrotonum, pecorique ingrata peritum  
Pabula serpyllum, molli quod passitur borto.  
Præstat item exiguum circumlustrat conyzam,  
Urticæque comas, & spinosus anagres;  
Sic & punice jellis ex arbore ramis,  
Regalisque amplis licet hæsis frondibus uti.  
Accipe item innocuus medicamentum frigore strumum,  
Atque invise pigris Syria prima æstate bubulcis.*

Nicander.

The smiling Southernwood, which groweth on tops of  
Pabula Marjoram, to beasts abhorred food, (bills,  
Conyza strowed, the haunt of Serpents spill,  
The Nettle-crops, thorny Anagres stay their mood,  
So do Pomegranate branches cut from tree:  
And the broad leaves of Kingly Haste use  
Strumæ, healing strumæ in barmes; cold I see,  
And Syria, which in Summer Neatbeards do refuse.

In like sort, to sprinkle the place with water, where in *Sal Ammoniacum* is dissolved, driveth away Serpents, as Avicenna affirmeth.

If any one anoint himself either with Dears-sewer, the fat of Elephants or Lions, Serpents will shun that person: and there be some, (as Pliny saith) that for fear of Serpents, do anoint their bodies with the seeds of Juniper. The juice of the black Vine extracted from the root, and anointed on the body, performeth the like. For preservation from Serpents, Nicander compoundeth this ointment. Take two Vipers about the end of Spring time, Deer-sewer thirty drams, Viper's rest thirty six drams, crude Oyl of Olives as much, commix them with nine ounces of Wax, boil the Serpents till the flesh fall from the bones, which you must cast away because they are venomous.

Of Unguents  
and things  
born about us,  
from which  
Serpents will  
run away.

They that will yet be more assured, let them anoint their bodies with a thin cerate, made of Wax, Oyl of Roses, a little Galbanum, some powder of Harts-horn, or else Cummin-seed of *Ethiopia*, &c. *Actium*. If a man carry about him the rooth of a Stag, or those small bones which are found in his hear, he shall be secured from Serpents. If any one do bear about him wilde Bugloss, or the rooth of the wilde Carot, he cannot be wounded of any Serpents. *Grevinus* is of the minde, that the Jet-stone, beside other manifest qualities, hath yet this as peculiar to it self; that he which carryeth it about with him, need neither to fear Serpents, nor any other poysons.

Now for venomous beasts, which are found in any houses, the best way is to pour scalding water into their dens and lurking holes. And if any man (constrained by necessity) can finde no other place to sleep, but such a one as where Salamanders, the Spiders called *Phalangia*, or the like Serpents do abound, it is good to stop the holes and corners with Garlick beaten with water, or some of those herbs which before we have spoken of. But yet men now a days hold it the safest course, to pour unquenched Lime sprinkled with water into their dens and secret corners.

As they that are bitten by a mad Dog, so all such persons be wounded by venomous creatures, are in exceeding great danger, unless at the first they receive speedy help and succour: The safest way therefore to cure the poyson, is by attractive, which draw from the more inward parts to the surface, and not to make too much post-haste in closing up the wound. But if any one hath swallowed down, and taken inward any poyson, the best way is (as *Diapsorides* writeth) to vomit often; but if the place affected, to draw out the poyson. Some use to suck the venom out, and others to cut off and dismember the part. And this is to be observed, that if any one will undertake to suck out the venom, the party that attempteth it must not be fasting; and besides, he must wash his mouth with some

some Wine, and after that, holding a little Oyl in his mouth, to suck the part, and to spit it presently forth. And before Cupping-glasses be applied, the part must first be fomented with a Sponge, then scarified deeply, that the venomous matter may the more speedily be drawn out from the more inward parts; and yet cutting off the flesh round in a compass, doth more good then any scarification.

But if the place will admit no section or incision, then cupping-glasses, with deep scarification, with much flame, must needs be used: for by attraction of the blood, and other humors with windiness, the payson is self must of necessity follow. And *Avicenna* in his 13. Book and tenth Chapter, counselleth that the sick person be kept from sleep, and so sit still, until he finde some easing or releasing from his pain. Besides, the member which is envenomed, ought to be bound round about, that the payson may not too easily convey it self, and penetrate into the more noble and principal parts, as the heart, liver, or brain. And in this manner having applied your Ligature, you must by the advice of *Fumellus*, set on your Cupping-glasses, and apply the herb *Calamint* upon the place, and to give the patient some of the root of Mugwort in powder, or the best Treacle, and such Cordials as do corroborate the heart; and for this intent, Bugloss, Borage, Rilm, and any of their flowers are much commended.

A Dove or Pigeon being divided in the midst, and applied hot to the place affected, attracteth payson to it self, and healeth. And the same effect and vertue have other living creatures, as namely, Hens and Chickens, young Kids, Lambs and Pigs, if they be set to in the beginning, immediately after the Cupping-glasses be removed, for being as yet hot and warm, they draw out the payson, and mitigate pain. But if neither any one for love or money can be found, that will or dare suck out the venom, and that no Cupping-glass can be provided, then it is best that the patient sup of Mutton, Veal, or Goosebroth, and to provoke vomiting. Yet they that will more effectually and speedily give help, use to kill a Goat, and taking out the entrails, with the warm dung there-in found, forthwith binde unto the place.

The learned Physician *Martibolus*, in his Comment upon *Discordis*, saith; that to avoid the danger that cometh by sucking out the venom, men now a days use to apply the fundament of some Cock or Hen, or other Birds after the feathers are pulled off, to the wounded place, and the first dying, to apply another in the same order, and so another and another, until the whole venomous matter be clean driven away: whereof one may be certainly assured, if the last Hen or Bird so applied, do not die. *Avicenna* the Arabian saith, that the Physicians of Egypt, (in which Country there be infinite store of venomous Beasts) do hasten to burn the part with fire, as the safest and surest remedy, when any one is in this way endangered: For fire not only expelleth payson, but for many other grievances. But the way how they used to burn with fire, was divers in these parts: For sometimes they used to sear the place with a hot Iron, and other whiles with a cord or mace being fired, and sometimes scalding Oyl, and many other devices they had with burning medicines: to finish this cure, as saith *Hieron. Mercurialis* in his first book *De Morb. Venenatis* writeth, and *Joh. Targantius*, *Influm. Chirurg. lib. 2.* saith, that the wound must first be seared with a hot Iron (if the place can endure it) or else some caustick and vehement corroding medicine must be used: for all such wounds are for the most part deadly, and do bring present death, if speedy remedy be not given: and therefore, according to *Hippocrates* counsel, to extream griefs, extream remedies must be applied; so that sometimes the safest way is to take or cut off that member, which hath either been bitten or wounded.

Neither am I ignorant (saith *Discordis*) what the Egyptians do in these cases: For when they reap their Corn in Harvest time, they have ready at hand prepared, a pot with pitch in it, and a string or band hanging at it; for at that time of the year they are most afraid of Serpents, which then chiefly do hide themselves in dark holes, and caves of the earth, and under thick clots and turfs, for Egypt aboundeth with such venomous and paysonful creatures. When as therefore they have wounded either the foot or any other part, they that are present, do put the string into the pot of pitch, and binding the place, they fall to cutting it with some instrument round in compass as the string is yes, after this done, they pour in of the pitch a sufficient quantity, then untwining and loosing the band, they lastly anoynt it with Garlick and Onions.

A certain Countryman being bitten of a Serpent, perceived by and by his foot to swell, and by little and little the force of the payson to swell up higher, and nearer to the heart, the Callie of life: who being taught and instructed of an old woman, to bury his foot under the earth, and to cut a Hen into two parts to apply to the wound, and to the Hen she wished him to lay a live Frog, who continually sucking the blood from the Hens flesh, might by this means at length attract and draw all the payson into it self. So when he had held his foot a whole night covered and buried under the earth, and finding no abatement, but rather an increase of his tormenting pain; at length by the advice and direction of a certain Noble Matron, he drank a good draught of *Theriac* and Honey tempered in Ale, and so after a few hours fell on a great and continual vomiting, by which means he was perfectly freed from the pains of the upper parts of his body, his feet notwithstanding continuing in their former swelling: which was also taken clean away, only by drinking the milk of a black Goat, so much in quantity at a time as one Eggs-shell would contain, his foot in the mean space being held or plunged in a sufficient quantity of the same milk. From which there issued a ran a foul stinking glutinous and stinkily matter, and this he was admonished to do by a certain Priest. But yet afterwards by chance, washing himself in a hot sunny day in a certain River,

and sitting upon the bank, his feet hanging down into the water, and he falling fast asleep, (he knew not well how long time he so continued) at length awaking, he plainly perceived the water that was near, on all sides to be filthy, stained and polluted with much stinking matter, and as it were dreggy, refuse and feculency, and from that time forwards, he remained well and lusty, and as found as a Bell.

Another time a Maid being bitten of a Serpent, laid presently upon the wound some fresh Cheese made of the milk of a white Goat, and pouring or sprinkling her foot with the milk of the same Goat, as a defecative for that part, was by this means restored to her former health, as a certain learned man testified in his Letters written to *Gessner*.

*Vegetius* affirmeth, that if any living creature be bitten and wounded of venomous Beasts, the place which is hurt, must first of all be suffumigated with Hens Eggs-shells burnt, which first ought to be infused in Vinegar, with a little Harts-horn, or *Galbanum*. After fomentation, the place must be scarified, and the blood must be let out, or else the place must be seared with a hot Iron, so far as the venom stretcheth. And this care must be had, that the Cauter be never applied and laid either above the joynts, or sinewy parts at any time, for the sinews or joynts being seared and burnt, there must of necessity a continual weakness and debility follow. Therefore great diligence must be used, that neither a little above, nor a little beneath the nerves and joynts, we lay any Cauterizing medicine: yea, although necessity biddeth us. But it is also requisite that every one thus wounded, do gently and easily provoke sweating with warm clothes cast upon him, and afterwards to walk up and down, and to take Barley-meal in his meat, with some leaves of the Ash-tree, and the white Vine added to it. And to the wound it is good to apply *Attick* Honey, or Cummin heated and parched, and so mixed with old Wine. Some use to mix new Hogs dung and *Attick* Honey tempered together with Wine, and so being warmed, to apply it as a Cataplasm, adding to it some urine of a Man.

I have laid before, that young Chickens being dissected or cut in pieces when they are warm, ought to be laid to the stinged part: and some there be that yeeld this reason why they should be good for this purpose, because (say they) there is a natural antipathy betwixt them, and venomous creatures. But this reason is reasonless, and I think rather, that Hens or young Birds, being of a very hot nature and complexion, do easily concoct and digest notable payson, and their stomachs do consume most dry and hard seeds, which the strongest man living cannot do; which may easily be proved by this argument, that many times by their ravening, they swallow down sand and little stones, which they do easily dissolve, and their crops very soon discharge, without any offence to them at all. And therefore the Spirits of an invenomed person, being helped and refreshed with the lively and strong natural heat of these fowls thus applied, and receiving and acquiring strength from the part wounded, and so hastily leaping out as it were, and quickly sparkling forth, they do expel, shut and draw out the payson.

Now, after we have described the general method of curing this mischievous evil, we will now descend to particular remedies, observing ever this rule and order, that first I will speak of such as are topical, or such as are outwardly applied; and next of such as be taken inwardly, and in both of them I will first describe compound, before I speak of simple medicaments. This one Lesson you must carry with you, that many remedies are prescribed and set down, which be not only good for the bitings of Serpents, but also for the bitings and stings of all other venomous creatures, as namely, of Scorpions, Tarantulae, Spiders, and the like. But yet, such these do properly respect Serpents, I will in this place set them down: beginning first (according to my promise) with such compounded medicaments, as are applied outwardly for the help against the stinging of Serpents.

*Theriac Andromachi* applied Plaster-wise, is notable for this purpose. So there be other vehement strong Plasters, whose vertue is to attract, expel, and discuss venom, of which are those which are made of Salt, Niter, Mustard-seed, and Rosemary-seeds, Dittany, or Dittander, and the root of Chamæleon: and this that followeth is of singular vertue. Take of the scum, froth, or spume of Silver one pound, Ceruse, and of the best Turpentine, of either as much as of the former, old Oyl three pounds, Wax six ounces, *Ammoniacum* *Thymiana*, four ounces, and of *Galbanum* as much: boyl the Ceruse, the scum of Silver, and the Oyl so long, that they will not cleave unto the hands, then melting the other ingredients, incorporate them all together, and use them when need is for any bitings, &c.

There is an Emplaster fathered upon one *Epigonus*, and bearing his name: for this *Epigonus* being in close Prison, and condemned to die, for revealing this Medicine had his Pardon granted him, and was freely discharged, because he therewith healed the daughter of the Emperor *Marcus*: for being sorely wounded by a Serpent in her breast, and all other Physicians despairing of help, yet with this she was recovered. It is also good for all new and old Ulcers, and for such as are either bitten by any kind of venomous creeping Worms and Serpents. Take of *Squamae hepaticae*, Verdigrise, of *Æ. usum*, of Frankincense, *Sul ammoniacum*, *Distilobchia rotunda*, of every one half an ounce, Turnep-seeds three scruples, of the root of Dragon-wort half an ounce, seeds of Mugwort nine scruples, pure Wax five pound, of *Colophonia* one pound, old Oyl three ounces, sharp Vinegar half a spoonful, Mustard-seed three scruples, *Spodium* nine scruples, Stone-allum and *Opopanax*, of either half an ounce: Infuse the metalline ingredients for three days in place



Vinegar, and beat and powder them together, melting those that are to be melted, then sprinkle on those that are dry, and all of them being thoroughly wrought and made up, according to the form of an Emplaster, use them where necessity requireth.

*Antonius Fumanellus*, a late Physician, prescribeth an experimented, and (as he calleth it) a divine Oyl against any poyson taken into the body, or the biting of any venomous Beasts and Serpents, whether it be received inwardly by drinking it down, or anointed outwardly upon the body, and this is it that followeth. Take of Oyl of Olives one pound, the flowers and the leaves of the herb called *S. Johnswort* bruised, boyl them for the space of three hours, and strain them; then boyl again other fresh flowers and leaves of the same herb and strain them hard, and do so again the third time, then add to them of the roots of *Gentian* and *Tormentil*, of either one ounce, boyl and strain them as you did before, and reserve this Oyl for your use.

*Andreas Matthiolus* in his Commentaries upon *Discofides*, doth exceedingly commend Oyl of Scorpions, because being anointed upon the pulses outwardly, it is (as he affirmeth) a singular remedy, not only against any poyson taken inwardly into the body by the mouth, but for the bitings and stings of any venomous creature whatsoever. The way to prepare and make it, he describeth at large, in his Preface upon the sixth Book of *Discofides*, which I think needles here to describe to avoid tediousness; therefore if any one be desirous to know the composition of it; let him read *Matthiolus* in the place before cited. Unquenched Lime mixed with Hony and Oyl, and applyed to the place the thickness of a cerote, is good against the wounds that come by any venomous Beasts biting.

Now I think it meet to set down those simple medicaments which are outwardly to be applied, either by laying on, or by anointing, against the sting and venomous biting of Serpents. It is best first to foment the sore place with hot Vinegar, wherein Catamint hath been boyled, and in head of Vinegar, one may take Salt-water, or Southernwood, Maidenhair and Garlicke, either in drink, meat, or to be used as an Ointment. The root of Aram, and Astrologe, and the leaves of the true Daffadil, and Oyl of Balm, is most effectual: also *Bdelium*, and the root either of the white or black Beet, is good against the bitings of Serpents.

Betony, Coleworts, especially the wilde Coleworts, Calamint, the leaves of the wilde Figtree, Centory, Onions, Germander, Chamaleon, the herb called Fleabane, wilde Carrets, Rocket, Heath, Fennil, Figs, Winter Cherries, *Enula Campana*, Barly-meal, the Day-lilly, Hyfop, the Flower-de-luce, Horehound, Balm, Water-cresses, Basil, Origan, Plantiney Leeks, Turneps, Madder, Row, Venen, Mulhard-seed, Scabious, and Saint Johnswort, all these plants are greatly praised amongst the Writers of Physick, for the mischiefs abovefaid.

*Pliny* is of opinion, that the bowels or entrails of Serpents themselves, being applied, will surely cure the wounds of all other Serpents, although they seem incurable. A live Serpent being caught, if it be bruised, beaten and stamped in water, and the hurt place fomented therewith, will assuredly help and do much ease.

*Qua nocuit Serpens, fertur caput illius apti  
Vulneribus jungi, sanat que sauciat ipsa,  
Ut Larissa curatum Telephus boia.*

Which may be thus thus Englished;

*What Serpent hurts, Men say by long experience,  
His head applyed doth cure: for where the wound,  
The help is also made, as in Telephus sense,  
Harm'd by Larissus spear, by it was cured found.*

And *Gual. Varignana* saith, divide or cut a Serpent, and lay it upon the place; and it will mitigate the anguish and pain. The seed of *Trochisci* and of *Tribmal* (which is a kinde of spurge) is greatly used for this; *Aut Tribmalum atrox, vulnus quatuor perungat*. Some besides these, do put the root of black Hellebore into the wound, because it draweth out the poyson, as I by mine own experience can testifie, saith *Matthiolus*.

There be also sundry Antidotes and Preservatives which are taken inwardly, that are very effectual against the bitings of Serpents and venomous beasts, as namely that, which is called *Theriac Andromachi*, or Mithridate, and the like compositions. *Galen* in his Book *De Theriaca ad Pisonem*, preterreth *Theriac Andromachi* before all other medicines either simple or compound, for virulent wounds; because it performeth that effect for which it is ministered. For it was never yet heard, that ever any one perished of any venomous hurt or biting, who without any delay forthwith drank that medicine: and if any man had taken it before he received any such dangerous hurt, if he were set upon and assailed by any poysonous creature, it hath not lightly been heard that he hath dyed of the same. There be many Antidotes described by the Ancients, which they set down to be admirable for the passions: As for example, that which *Avisen* termeth *Theriac mirabilis*, whose composition is as followeth. Take of *Opium* and of Myrrhe, of either of them a dram, Pepper one dram and a half, the root of *Aristolobea longa* and *rotunda*, of each of them three drams, Wine two drams; make them up with Hony and Rocket water, so much as is sufficient for an Electuary: the quantity to give, is four scruples, relented in some fit and convenient decoction.

King

*King Antiochus*, surnamed *Magnus*, had a kinde of *Theriac* which he used against all poysons, which is described of *Pliny* in his 20. Book and last chapter in this wise. Take of wilde Thyme, *Oppanax*, and the herb called *Gromel*, of each a like much, two drams, *Trifolite* one dram, of the seeds of *Dill*, *Fennil*, *Smallage*, *Anise*, and *Ammi*, of every one alike fix drams, of the meal of *Orobis* twelve drams: all these being powned and finely searfed, mixt with Wine a sufficient quantity, be made into Trochises, whereof every one must weigh one dram, give thereof one dram at a time in a draught of Wine. There is another Antidote and preservative against any poyson, described by *Paulus Aeginetius*, much like unto this, which is thus: Take of Bryony, *Oppanax*, of the root of *Iris Illirica*, and of the root of *Rosemary*, and of Ginger, of each of these three drams, of *Aristolobea* five drams, of the bell Turpentine, of wilde Rue, of each three drams, of the meal of *Orobis* two drams; make them into Trochises with Wine, every one weighing one scruple and a half, or two scruples to be given in Wine.

*Galen* in his second Book *De antidotis*, chapter 49. discourseth of a certain *Theriacal* medicament, called *Zappia anidotis*, (so taking the name of one *Zappius*) which was notable against all poysons, and bitings of venomous creeping creatures. This *Zappius* in his Letters written unto *Mithridates*, solicited him very much, that he would make some experiment of his Antidote: which as he put him some poyson aforehand, and then to take the Antidote: or else to receive the Antidote, and after that to drink some poyson. And put him in remembrance, to try it also in those that were wounded by any manner of way by Serpents, or those that were hurt by Arrows, or Darts, anointed or poysoned by any destroying venom: So all things being dispatched according to his pramonition, the Man (withstanding the strength of the poyson) was preserved safe and found by this alexipharmatical medicine of *Zappius*.

*Matthiolus* in his Preface upon the sixth Book of *Discofides*, entreating of Antidotes and preservatives from poyson, saith; that at length, after long study and travail he had found out an Antidote whose vertue was wonderful and worthy admiration; and it is a certain quintessence extracted from many simples, which he setteth down in the same place. He saith it is of such force and efficacie, that the quantity of four drams being taken either by it self, or with the like quantity of some sweet fasting Wine, or else with some distilled water, which hath some natural property to strengthen the heart; if that any person hath either been wounded or stricken of any venomous living thing, and that the patients life be therewith in danger, so that he hath lost the use of his tongue, seeing, and for the most part all his other senses, yet for all that, by taking this his Quintessence, it will recover and raise him as it were out of a dead sleep, from sickness to health, to the great astonishment and admiration of the standers by. They that desire to know the composition of this rare preservative, let them read it in the Author himself, for it is too long and tedious to describe it at this time.

There be besides these compounds, many simple medicines, which being taken inwardly, do perform the same effect, as namely the Thistle, whereupon *Serenus* hath these verses following:

*Carduus & nondum doliis fullonibus aptus,  
Ex illo radix tepido potatur in annis.*

That is to say;

*The root of Teasle young, for Fullers yet unfit,  
Drunk in warm water, venom out doth spit.*

That Thistle which *Qu. Serenus* here understandeth, is properly that plant which of the Greeke is called *Sylvestris*. Yet it is taken sometimes for other prickly plants of the same kinde, as for both the Chamaleons, *Dipsacos*, or *Labrum Veneris*, *Splina alba*, *Eryngium*, and some other. But *Discofides* attributeth the chiefeft vertue against poysons, to the Thistle called *Chamaleon albus*, and to the Sea-thistle called *Eryngium marinum*, which some call Sea-hul, or Hulver: for in his third book and ninth chapter, entreating of *Chamaleon albus*, he saith thus; The root of it taken with Wine inwardly, is as good as Treacle against any venom: and in the 21. chapter of the same Book, *Eryngium*, is (saith he) taken to good purpose with some Wine, against the biting of venomous creatures; or any poyson inwardly taken. And the same *Serenus* ascribeth to the same vertue to the Harts curd or rennet, as followeth.

*Cervino ex factu commixta coagula visco  
Sumentur, quares membris agit atra venena.*

In English thus;

*Wine mixt with Rennet taken from a Hart,  
So drunk, doth venom from the members part.*

He meaneth a young Hart, being killed in the Dams belly, as *Pliny* affirmeth also the same in his 8. Book and 30. chapter in these words; The chiefeft remedy against the biting of Serpents, is made of the Coagulum of a Fawn; kill'd and cut out of the belly of his Dam. Coagulum, is nothing else but that part in the belly which is used to thicken the Milk.



## The Conclusion of this General Discourse of SERPENTS.

HAVING thus discoursed of the medicinal qualities in Serpents and the remedies which Almighty GOD in nature hath provided against their venom, now for a conclusion, I will add some other natural uses of them, and shut up all in Moralities, and in sundry ways to take them.

There were certain *Amazons*, as *Pierius* noteth, that in their warlike preparations and Arms, did use the skins of Serpents. And to the intent, that this may not seem strange, the *Triglosses* did eat Serpents and Lizards, for they lived in Caves in head of Houses, and their voice was not a significant voice, but a kinde of screeching, like gnashing. And for these causes, Serpents are very much afraid of any one of this Nation. Likewise certain of the *Candeians* were called *Ophiophagi*, that is, Eaters of Serpents; and one part of the people of *Arabia* eat Snakes. But in *India*, *Etiohia*, and an Island in the Ocean, found out by *Jambolus*, there are Serpents which are harmless, and their flesh very sweet and pleasant to be eaten: So are there in *Macedonia*, a Province of *Asia*. In *Manzi* in the upper *India*, and *Garaia*, they sell the flesh of Serpents in open Markets. These Serpents are called *Guane*, and the common people are forbidden to eat them, because they are very delicate, even as Pheasants, Partridges and Peacocks are in *France*. Yet is there but one way to dress them, which is, to roul them in Lard, and so to seethe them. For first they bowle them, then wash them and fold them up together round, putting them into a pot no bigger then to receive their quantity; upon them they cast Pepper with water, and so seethe them upon wood and coals that will not smok. With this Lard there is made a broth sweeter then any Nectar, which they use in many banquets of great account.

But for the taking of Serpents, I will yet add one or two more experiments, wherein the Ancients revenged themselves upon these irreconcilable enemies of Mankind. They did use to let into the earth a deep pit, whereinto all venomous creatures would gather and hide themselves, then came they suddenly and stopped the mouth of that vessel, whereby they inclosed all that were taken, and so making a great fire, cast the said pit of venomous Serpents into the flame, which consumed them all. Otherwise they took a living Serpent, and digged in the earth a deep Well or pit so deep as nothing at the bottom could climb up to the top thereof, into this pit they would cast the serpent, and with her a brand of fire, by means whereof the enclosed Serpent would fall a burning for her life, at the hearing whereof, her fellows of the same kinde, were thereby easily invited to come at her call to give her relief, (as we have shewed elsewhere) who finding the noise in the bottom of the pit, do slide down of their own accord, whereby they likewise intrap themselves in the same pit of destruction.

But the Juglers or Quack-salvers take them by another course, for they have a staffe lit at one end like a pair of tongs, those stand open by a pin, now when they see a Serpent, Viper, Adder or Snake, they set them upon the neck near the head, and pulling forth the pin, the Serpent is inevitably taken, and by them loosed into a prepared vessel, in which they keep her, and give her meat. It is reported, that if a Serpent be stricken with a Reed, the standeth still at the first blow, as if he were astonish'd, and so gathereth herself together; but if she be so stricken the second or third time, as one delivered from her astonishment and fear, she recolleth her wits and strength, and slideth away. The like observation upon this, is that of the Ancients, that a Serpent cannot be drawn out of her den by the right hand, but by the left; for they say, if one lay hold on her tail by the right hand, she will either slide farther into the earth from him, or else suffer herself to be pulled in pieces, never turning again; and therefore saith mine Author, *Non credit trahenti, sed elabimur fugient, aut cum abrumptis*, the yeeldeth not to him that draweth her, but slideth away, flying from him, or else suffereth herself to be pulled in pieces in the combat.

The sundry Hieroglyphicks, statues, figures, Images, and other moral observations about Serpents, are next here to be expressed, which the Ancients in their Temples, Shields, Banners, Theatres, and publique places had erected for their honours and dignity. And first of all, in the Temple of *Daphni*, near the Oracle, there was placed the Serpent which provoked *Apollo* to fight with him, wherein it was by him slain. And the *Hermopolitans* did reserve the Image of *Typhon*, in a Sea-horse, whereupon sat fighting a Hawk and a Serpent: by the Sea-horse they signified the Monster *Typhon*, by the other beasts, as namely the Hawk and the Serpent, how by this principality and government, which he had gotten by violence, he troubled both himself and others.

*Hercules* had in his shield certain Serpents heads, pictured with these verses.

*Bin senahis videm, stridentibz essera summis,  
Colla venenato vultu maculosa draconum.  
Tum magis offenso spirantia gutture virum,  
Quam magis Alcides effuso sanguine pugnat.*

Which may be Englished thus;

*Of Dragons heads twice six here maist thou see,  
Raging amongst the flames with poisoned spotted face:  
Casting most venom forth when they enraged be,  
As when Alcides saw his blood distill apace.*

*Heredotus.  
Mela.  
Pliny.*

*Solinus.  
Scaliger.  
Boetius.*

*Aenes Syl.  
Nicander.  
Ventius.  
P. Marius.*

*Florentinus.*

*Celius Rhod.  
Aelianus.*

*Constantinus.*

*Flivy.  
Tector.*

*P'ut. reb.  
Pierius.*

And so *Virgil* saith of *Aventinus*.

*Clypeus insignis parentum*

*Centum angues, cinclaque gerit Serpentes Hydram,*

That is to say;

*His shield an hundred Snakes, his Fathers crest,  
An Hydra in their compass is entrest.*

*Osir* which reigned among the *Tyrrhenians*, gave in his Standard and Coat of Arms a Serpent. Now the people *Osiri* (from whom it may be he was sprung and derived) lived in *Campania* in *Italy*, as we have shewed already.

In ancient time we read, that when hostility began to be compounded, they had *Heralds* and *Em-bassadors* of Peace, which they called *Caduceutores*, which carried upright a certain Rod or Staffe called *Caduceus*; this Rod was very straight, and at the either side were artificially joyned two Serpents figures, winding and crooking into each other as the manner of Serpents is. This Rod was so signified Perfect and Upright Reason or Understanding; by the two crooked Serpents at either side thereof, was figured the two Armies invading and assailing the Upright understanding, yet not pre-ailing: For this passed through and betwixt them without harm, by truce and entreaties of Peace. This Rod was therefore consecrated to *Mercury*, the tails of the Serpents reaching down to the handle or half of the Rod, where they were adorned with wings. *Alciatus* made these Emblematical verses upon the *Caduceus*.

*Anguibz implicitis, geminus Caduceus alis,*

*Inter Amalthea cornua rectus adest.*

*Pollentes sic memento viros, fandique peritos*

*Judicat, at rarum copia multa bees:*

In English thus;

*Twixt Ceres horns the Rod of Peace doth stand*

*Upright with winding Snakes, and double-winged tails,*

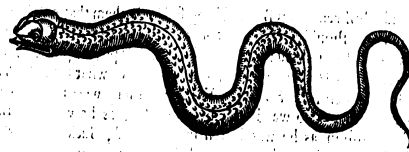
*To shew that mindes and tongues with Learnings brand,*

*Are left with plenty in all worldly vails.*

But having thus entred into the Hieroglyphical Emblems, if I should say so much as I finde made ready, and squared for the architecture of this discourse, I might lose my self in a voluminous world of matter, therefore I will but give the Reader a taste hereof. By the Serpent in holy Writ, are many observative significations; and first, that the Devil himself, which is *Malius Dru mahi* Mundi, an evil God of an evil World, should be termed and exprest by a Serpent. The cause saith *Pierius*, in *lingua notatio*, the continual and never ceasing motion of a Serpents tongue: and so the continual and ever-working persuasions of Diabolical tentations, and a true mixture and limb of this old Serpent, speaketh otherwise with his tongue, then he thinketh with his heart. Therefore it is also said, that a natural Serpent hath a cloven or twisted tongue.

*Clement* saith truly, that Serpents do also signifie Men given over to sins, and fraudulent impostures or malices, *Unus hyristes bo agtator, lukoi agrios bo plonethikos; kai ophis bo apatron*, that is, There is an insolent and an imtemperate Ass, there is a raging Wolf which is covetous, and there is a Serpent which is an Impostor and fraudulent. The same learned man saith, that Riches are like to a Serpent: For as when an ignorant Man thinketh to take a Serpent without harm by the tail, she turneth back again and biteth him; but if he take her by the neck, she cannot excute any part of her malice: even so when a wife Man hath the managing of riches, by virtue of his discretion he so charmeth them, that there is not in them any harm at all: but the foolish Man is mortally stung by his imprudent possession and dispensation of them.

## Of the ADDER.



Y<sup>T</sup> filleth out in the particular Discourse of Serpents, that I exprest the most known Serpent so though I am not ignorant, that there be which write it *Nadere*, of *Natrix*, which significeth a water Snake, yet I cannot consent unto them so readily, as to depart from the more vulgar received word



matter, and then followeth dulness in the head, and distraction in the minde: they live long which endure it three days, and it was never known that any lived above seven days: this also being observed, that those that be hurt by a female do die soonest. For together with their biting, they infuse a vehement pain, which causeth swelling, and the sore to run.

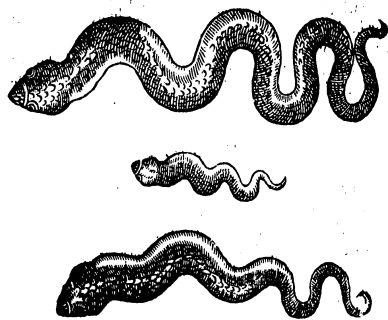
I finde the cure hereof in *Aetius* to be thus, first of all Triacle must be given to the sick person to drink, and also laid upon the wound, also drawing or attractive Plaisters, and such Poultices which are fit for running Ulcers. But first before the Plaisters, scarifie all the places about the hurt, and binde the upper parts hard, then launce the sore a little with a Pen-knife, and let him drink sweet water with Rungwort, Gourds, *Castoreum*, and *Cassia*: *Avicenna* prescribeth in the cure of these Serpents venom *Castoreum*, Cinamon, the root of Centory, of each two ounces with Wine, and the root of long Hartwort, of *Aloes*, the juice of the root *Gentian*. And for emplaister, Honey lodand dried, and so pounded, the roots of Pomegranates, and Centory, the seed of Flax, and Lettuce, and wilde Rue: And so I conclude with Doctor *Gesner*, *Percussus ab Ammodyte festinet ad remedium, si quis nemo offigere*, He which is hurt by an *Ammodyte*, let him make hast for a remedy, without which never Man escaped death.

### Of the ARGES and ARGOLÆ.

Here is mention made in *Galen* and *Hippocrates*, of a Serpent called *Arges*: Now *Arges* signifieth in Greek white, swift, idle, ill mannered: of this Serpent *Hippocrates* telleth this story. There was (saith he) a young man drunk, which lay asleep upon his back in a certain house, gaping: Into this Mans mouth entered a Serpent called *Arges*, the young Man perceiving it in his mouth, strived to speak and cry, but could not, and so suddenly gnashing his teeth, devoured and swallowed down the Serpent: After which he was put to intolerable pains, his hands stretching and quivering like as a Mans that is hanged or strangled, and in this sort he cast himself up and down and dyed. It seemeth therefore that this Serpent hath his name from the sudden destruction he bringeth to the creatures it smiteth, and therefore in ancient time we read that *Mercury* was called *Argiphon*, for killing of Serpents.

The *Argole* are only mentioned by *Suidas*, for he saith, that *Alexander* brought them to *Alexandria* from *Argos*, and cast them into the River to expel and devour the *Aspes*: where they continued a long time, till the bones of the Prophet *Jeremy* were brought out of *Egypt* unto *Alexandria*, which slew them, (as the same Author writeth:) And thus much of these two kindes of Serpents.

### OF ASPES.



IN Hebrew as appeareth, Deut. 32. the Asp is called *Pohen*, in Psal. 58. *Akchub*, in Isa. 59. & Jer. 8. *Ziphron*, an Asp or a Cockatrice, worse then a Serpent. The *Arabians*, *Aspor*, and *Hesoor*; the *Greeks*, *Aspis*; the *Italians*, *Aspe*, and *Aspide*: the *Spaniards*, *Bivora*; the *French*, *Aspis*; the *German*, *Ein slang german*; and the *Laines*, *Aspis*. About the notation or derivation of this word, there is some difference among Writers. *Aristophanes* deriveth it from *Alpa*, an intensive Particle, and *Spiza*, which signifieth to extend; either by reason of his sharp shrill hissing, or for the length of his body. Others derive *Aspis* from *Hio*, which signifieth venom or poyson, and therefore saith the Scripture: The poyson of *Aspis*, because that is a predominant poyson. The *Laines* call it *Aspis*, quod venenum aspergit morsu, because it sprinkleth abroad his poyson when it biteth. Besides we read of *Aspis* a Buckler, an Island in the *Lycian* Sea, a Mountain in *Asiack*, and there is a fashion of camping Souldiers in the field called *Aspides*.

Tx

The Epithets declaring the nature of this pestiferous Serpent, are *Isobetes*, rejoicing in poyson, *Eligessa*, winding, *Lichometes*, putting out the tongue, *Smerdale*, fearful, *Phoinessa* cruelly killing. Likewise in *Latine*, dry, sleeping, droulie, deadly, swelling, and *Aspis Pharia*, a Pharian Asp, so called of the Island *Pharus*, where they abound. It is said that the Kings of *Egypt* did wear the Pictures of *Cal. Rhod.* Asps in their Crowns; whereby they signified the invincible power of principality in this Creature, whose wounds cannot easily be cured: And the Priests of *Egypt* and *Ethiopia* did likewise wear very long Caps, having toward their top a thing like a Navel, about which are the forms of winding Asps, to signifie to the people, that those which resist GOD and Kings, shall perish by unresistible violence. Likewise by an Asp stopping his ear, was figured and understood a Rebel, *Pierius*.

obeying no lawes or degrees of the Higher power. But let us leave this discourse of moralities, and come nearer to the naturall description of Asps. There are many kindes of Asps after the *Egyptian* division, for one kinde is called *Aspis fæca*, a dry Asp. This is the longest of all other kindes, and it hath eyes flaming like fire, or burning coals; another kinde is called *Aspis*, which doth not only kill by biting, but also with spitting, which it sendeth forth while it setteth his teeth hard together, and lifteth up the head. Another kinde is called *trundo*, because of the similitude it keepeth with Swallows, for on the back it is black, and on the belly white, like as is a Swallow. We read also in *Albertus* of *Aspis Himalia*, and *Hippocrepis*, but it may be that both these names signifie but one kinde. This *Himalia* killeth by sleeping, for after that the wound is given, the Patient falleth into a deep and sweet sleep, wherein it dyeth: and therefore *Leonicens* saith: *Ilam fuisse, ex cujus veneno fuit Cleopatram suorum mortem causavit*, that it was the same which *Cleopatra* bought to bring upon her self a sweet and easie death: There is also an Asp called *Athæa*, which is of divers colours; But I do consider that all the kindes may well be reduced to three, that is, *Pyræ*, *Egineta*, *Chersæ*, and *Chelidonia*: *Pyræ* hurteth by poysoning mens eyes, by spitting forth venom, *Chersæ* liveth on the land, and *Chelidonia* in the waters.

The Asp is a small Serpent, like to a land Snake, but yet of a broader back, and except in this differeth not much from the Snake, their necks swell above measure, and if they hurt in that poyson, there can be no remedy, for the stroak of their eyes are exceeding red and flaming, and there are two pieces of flesh like a hard skin which grow out of their foreheads, according to these Verses of *Nicander*;

*Præterea gemina oculi instar fronte caruncle*  
*Herent, sanguinis scintillant lumina flammis.*  
 That is to say;  
*As hard as Brazen two bunches in their face*  
*Do grow; and flaming bloody eyes their grace.*

And the dry Asp, so called because it liveth in mid-lands, farre from any water, hath a vehement strong sight, and these eyes both in one and other are placed in the Temples of their head. Their teeth are exceeding long, and grow out of their mouth like a Boars, and through two of the longest are little hollowes, out of which he expresth his poyson: They are also covered with thin and tender skins, which slide up when the Serpent biteth, and so suffer the poyson to come out of the holes, afterward they return to their place again. Of all which thus writeth *Nicander*;

*Quatuor hinc intra Maxilla concava dentes,*  
*Rodices fixere suas, quas iuncta quidvisdam*  
*Yelluula tunica obducit, triste unde venenum*  
*Esfundit, si forte suo se appropinquet hosti.*

In English thus;

*Within the hollow of their cheeks fiery teeth are seen*  
*Fast rooted, which a coat of skin doth joyn and over-bide,*  
*From whence sad venom is forth sent when she is keen,*  
*If that her so she chance to touch as she doth glide.*

The scales of the Asp are hard and dry, and red, above all other venomous Beasts, and by reason of their exceeding drought, she is also accounted deaf. About their quantity here is some difference among Writers: For *Ælianus* saith, that they have been found of two cubits length, and their other parts answerable: Again, the *Egyptians* affirm them to be four cubits long: but both these may stand together, for if *Ælianus* say true, then the *Egyptians* are not deceived, because the greater number containeth the lesser. The Asp *Pyræ* is about two cubits long: the *Chersæan* Asps of the earth, grow to the length of five cubits; but the *Chelidonia* not above one, and this is noted, that the shorter Asp killeth soonest, and the long more slowly: one being a pace, and another a fathom in length. *Nicander* writeth thus;

*Tam proceram extenso quærat quam brachia ducti,*  
*Tamque crassities est, quantum missile telum,*  
*Quod faciens hastæ dextra subit expolit arti.*

Which



Which may be thus Englished;

As wide as arms in force out-stretched,  
So is the Asp in length,  
And broad even as a casting Dart;  
Made by a wife Smiths strength.

Artus.  
Olav.

The colour of Asps is also various and divers, for the *Irundo* Asp, that is, the *Cebellidius*, resembleth the Swallow; the *Pysa* or spitting Asp resembleth an Ash colour, flaming like Gold, and somewhat greenish; the *Chersaan* Asp of an Ash-colour or green, but this later is more rare, and *Pierus* saith, that he saw a yellow Asp near *Bellus*: Of these colours writeth *Nicander*:

*Squalidus interdum color albet, sepe virenti,  
Cum macula sepe est cineres imitatur figura,  
Nonnunquam ardens: veluti succenditur igne.*

Thus overthwart;  
Their colour whitish pale, and sometime lively green,  
And spots which do the Asp resemble,  
Some fiery red: in *Asbiop* black Asps are seen,

*Idque nigra Asbiopum sub terra; quide refugit  
Nilus sepe lutum, viciunt in Nereae vobis.*

And some again like to *Nerean* mud,  
Cast up by flowing of the *Nilus* flood,

Am. Parew.

Bellinus.

The Countreys which breed Asps, are not only the Regions of *Africk*, and the Confines of *Nilus*, but also in the Northern parts of the World (as writeth *Olav Magnus*) are many Asps found: like as there are many other Serpents found, although their venom or poison be much more weak then in *Africa*; yet he saith, that their poison will kill a man within three or four hours without remedy. In *Spain* also there are Asps, but none in *France*, although the common people do stile a certain creeping thing by that name. *Lucan* thinketh that the Original of all came from *Africa*, and therefore concludeth, that Merchants for gain have transported them into *Europe*, saying;

*Ipse coloris egest, gelidum non transit in orbem  
Sponte sua, Niloque tenus metitur arenas.  
Sed quis erit nobis lucri pudor? Inde petuntur,  
Huc Lybiae mortes & scimus Aspidæ merces.*

In English thus;

The Asp into cold Regions not willingly doth go,  
But near the banks of *Nilus* warm, doth play upon the sands.  
Oh what a shame, of wicked gain must we then undergo,  
Which Libyan deaths and Aspidæ wares have brought into our lands?

Ellianus.

Gillius.

Their abode is for the most part in dryest soyls, except the *Cebellidian* or Water Asp, which live in the banks of *Nilus* all the year long, as in a house and safe Castle, but when they perceive that the water will overflow, they forsake the banks sides, and for safeguard of their lives, beake them to the Mountains. Sometimes also they will ascend and climb trees: as appeareth by an Epigram of *Anthologus*. It is a horrible, fearful, and terrible Serpent, going slowly, having a weak sight, alwayes sleepy and drowsie, but a shrill and quick sense of hearing, whereby they warned and advertised of all noyse, which when he heareth, presently she gathereth her self round into a circle and in the midst listeth up her terrible head: Wherein a man may note the gracious providence of Almighty GOD, which hath given as many remedies against evil, as there are evils in the World. For the dullness of this Serpents sight, and slownesse of her pace, doth keep her from many mischiefs. These properties are thus expressed by *Nicander*;

*Formidabile cui corpus, tardumque volumen,  
Quandoquidem transversa via est prolisæque ventris  
Spira, veterisque vivere videntur oculi.  
At simul ac facili fors observaverit aere*

This feared Asp bath slow and winding pace,  
When as her way on belly she doth trauele,  
Her eyes shrank in her head winking, appear in face,

*Vel minimæ strepitum, segnes à corpore summi  
Excussit, & teretem finiat mors asperatellum,  
Horrendumque capiti, porrequeque pedibus.*

In English thus;

Till that some noise her watchfull ear doth heare,  
Then sleep shok'd off, round is her body gather'd,  
With drowsfull head, on mounted neck up lifed.

The voice of the Asp is hissing, like all other Serpents, and seldom is it heard to utter any voyce or sound at all, except when she is endangered, or ready to set upon her enemy. Wherupon saith *Nicander*;

*Grave sibilat ipsa  
Bestia, dum certum vomit ira concita motum.*

In English thus;

This beast doth hiss, with great and lowd'st breath,  
When in her mood she threatneth certain death.

That place of *David*, Psalm. 58. which is vulgarly read a death Adder, is more truly translated *A dref* Asp, which when she is enchanted, to avoid the voyce of the Charmer, she stoppeth one of her ears with her tail, and the other she holdeth hard to the earth: And of this incantation thus writeth *Vincencius Boninacensis*. *Virtute quorundam verborum incantatur Asp, ne veneno incrimetur, vel ut quidam dicunt ut quidam capi possit, & gemma de fronte ejus auferri, quæ natus est in eo nascitur, that is to say, The Asp is enchanted by vertue of certain words, so as she cannot kill with her poison, or as some say, be taken quietly without resistance, and so the Gem or precious Stone be taken out of her forehead, which naturally groweth therein. And from the words of the Psalm aforesaid, not only the certain and effectual use of charming is gathered by *Plerus*, but also by many justified in the case of Serpents. Whereof I have already given mine opinion in the former general Treatise, unto the which I will only add thus much in conclusion, which I have found in a certain unnamed Author; *Demonis dispartum cum verbis ad Serpentes, & insiditque interiori hoc fecerunt, ut Serpentes aut putum eorum mouerent, & sine lesione tractabiles exhiberentur*: Which is thus much in effect; Devils run up and down with words of enchantment to Serpents, and by an inward or secret infection, they bring to pass that the Serpents dispose themselves after their pleasure, and so are handled without all harm. And indeed, that it may appear to be manifest, that this incantation of Serpents is from the Devil, and not from God, this only may suffice any reasonable man: because the Palmist plainly expresseth, that the Serpent shifeth it off, and avoideth *Periculosissimum multarum incantationes*, the most skilful Charmer. Now if it came from the irresistible power of Almighty God, it should pass the resistance of him or Devils; but being a fallacy of the Devil, the Serpent (wiser in this point then Men that be-tempting temptation of the Devil or Men, which would beguile us with shadows of words and promises of no valuable pleasures.*

If we may believe *Pliny*, *Ellianus*, and *Philarchus*, the *Egyptians* lived familiarly with Asps, and with continued kindness was them to be tame. For indeed among other parts of their savage beastliness, they worshipped Asps even as household Gods, by means whereof the subtil Serpent grew to a sensible conceit of his own honour and freedom, and therefore would walk up and down and play with their children, doing no harm, except they were wronged, and therefore would walk up and down and play with their children, when they were called by a certain significant noise, made by knocking of the fingers. For the guests whereof they would all of them come forth of their holes; and creeping up, or lifting their heads to the table, leaving their lower parts on the ground, there licked they the said prepared meat, in great temperance by little and little without any ravening, and then afterward departed when they were filled. And so great is the reverence they bear to Asps, that if any in the house have need to rise in the night time out of their beds, they first of all give out the sign or token, lest they should harm the Asp, and so provoke it against them: at the hearing whereof, all the Asps get them to their holes and lodgings, till the person stirring be laid again in his bed.

The holy kinde of Asps they call *Thermusis*, and this is used and fed in all their Temples of *Isis* with the flesh of Oxen or Kine. Once in the year they crown with them the Image of *Isis*, and they say that this kinde is not an enemy to Men, except to such as are very evil, wherupon it is death to kill one of them willingly.

It is reported of a certain Gardiner making a ditch or trench in his Vineyard, by chance and ignorantly, he set his spade upon one of these *Thermusis* Asps, and so cut it asunder, and when he turned up the earth, he found the hinder part dead, and the fore-part bleeding and stirring: at which sight his superstitious heart overcome with a vain fear, became so passionately distressed, that he fell into a vehement and lamentable frenzy. So that all the day time he was not his own man, and in the night, in his mad fits he leapt out of his bed, crying out with pitiful and eager complaint, that the Asp did bite him, the Asp did wound him, and that he saw the picture of the said Asp (by him formerly slain) following him, and tearing his flesh, and therefore most intently craved help against it, saying still he perished by it, he was mortally wounded. And when he had now (saith *Ellianus*) continued a while in this superstitious fury and disease of the minde, his kindred and acquaintance brought him into the house of *Serapis*, making request unto that sainted God to remove out of his sight that spectre and apparition; and so he was released, cured and restored to his right minde.

This kinde of Asp they also say is immortal and never dyeth, and besides it is a revenger of sacrifice, as may appear by such another History in the same place. There was a certain *Indian* Peacock sent to the King of *Egypt*, which for the goodly proportion and feature thereof, the King out of his devotion consecrated to *Jupiter*, and was kept in the Temple. Now there was (saith he) a certain young Man which set more by his belly, then by his God, which fell into a great longing for to eat of the said Peacock: and therefore to attain his appetite, he bribed one of the Officers of the Temple with a good sum of Money to steal the said Peacock, and bring it to him alive or dead. The covetous wretch enraged with the desire of the Money, sought his opportunity to steal away the Peacock, and one day came to the place where he thought and knew it was kept, but when he came, he saw nothing but an Asp in the place thereof, and so in great fear leaped back to save his life, and afterward disclosed the whole matter. Thus saith *Ellianus*.

The domestic Asps understand right and wrong; and therefore *Philambus* telleth a story of such an Asp, which was a female, and had young ones: in her absence one of her young ones killed a child





A. bee definition.

Description of their parts.

No respiration in Bees.

Differences of Bees from nature.

Description of the King.

Differences in regard of sex.

A Bee is a cut-waisted living creature, that can flye, having four wings, and bloudlesse, the only Crafts-maler of Honey-making. Their eyes are somewhat of a horny substance; hid deep in their bodies, as is also their sting: they want neither tongue nor teeth, they have four wings, being of a bright and clear colour, growing to their shoulder-blades, whereof the two hinder-most are the lesser, because they might not hinder their flying: and out of their short feet or stumps there grow forth as it were two fingers, wherein they carry a little stone, for the poising and making weighty their small bodies in stormy, tempestuous, blustering or troublesome weather, for fear lest they might be driven from their house and home, by the contrary rage and violence of the windes. They do not breath (by *Plinius* good leave) but either pant, move, or stir (as the heart or brain doth) and by transpiration they are comforted, refreshed, and made lively. Their stomach is contexted and framed of the thinnest part of all their members, wherein they not only retain, and safely keep their Honey dew which they have gathered, but also digest, purifie, and cleanse it, which is the true and only reason, why the Honey of Bees is longer kept pure and fine, than any Manna or Meldew, or rather it is not at all subject to corruption.

Bees even by nature are much different: for some are more domestical and tame, and other again are altogether wilde, uplandish, and agrestial. Those former are much delighted with the familiar friendship, custom and company of men, but these can in no wise brook or endure them, but rather keep their trade of Honey-making in old trees, caves, holes, and in the rudest, and rubbish of old walls and houses. Of tame Bees again, some of them live in pleasant and delightful Gardens, and abounding with all sweet senting and odoriferous plants and herbs: and these are great, fat, and big bellied. Others again, there be of them that live in Towns and Villages, whole study and labour is to gather Honey from such plants as come next to hand, and which grow farther off, and these are lesser in proportion of body rough and more unpleasant in handling, but in labours, industry, wit and cunning, far surpassing the former. Of both sorts of these, some have stings, (as all true Bees have:) others again are without a sting, as counterfeits and bairdly Bees, which (even like the idle, sluggish, lister, and ravenous cloythered Monks, thrice worse than they) you shall see to be more gorbelled, have larger throats, and bigger bodies, yet neither excellent or remarkable, either for any good behaviour and conditions, or gifts of the minde. Men call these unprofitable cattle, and good for nothing. First, that is Drones; either because they would seem to be labourers, when indeed they are not: or because that under the colour and pretence of labour (for you shall sometime have them to carry wax, and to be very busie in forming and making Honey-combes,) they may eat up all the Honey. These Drones are of a more blackish colour, somewhat shining, and are easily known by the greatness of their bodies. Besides, some Bees are furnished of the Kingly race, and born of the blond Royal: whereof Aristotle maketh two sorts, a yellow kinde, which is the more noble, and the black, garnished with divers colours. Some make three Kings, differing in colour, as black, red, and divers coloured. *Mencervius* saith, that those who are of sundry colours are the worse, but in case they have diversity of colour with some blackness, they are esteemed the better. He that is elected Monarch (as he is called) and Captain General of the whole swarm, is ever of a tall, personable, and heroical stature, being twice so high as the rest, his wings shorter, his legs straight, his way, and strong; his gate, pace, and manner of walking more lofty, stately, and upright, of a venerable countenance; and in his forehead there is a prominent red spot or mark with a Diadem; for he far differeth from the popular and inferior sort in the comeliness, beauty, and honour. The Prince of Philosophers commended the sex of Bees, but the greatest company of learned Writers do distinguish them: whereof they make the feminine sort (as he the greater). Others again will have them the lesser, whereof they make the masculine sort (as he the greater). Others know nor acknowledge any other males, besides their Dukes and Princes, who are more able and handfome, greater and stronger than any of the rest, who stay ever at home, and very seldom (unlike with the whole swarm) they stir out of doors, as those without nature but pointed out to be the fittest to be slander-bearers; and to carry anivents in the camp of *Ym*, and to be ready at the elbows of their loves to do them right: Expensive to teaching, that they do sit on eggs, and after the manner of birds, do carefully cherish and make much of their young, after this thin membrane or skin wherein they are enclosed is broken, and the young Bees have very thin and trembling wings, but they that are a year old, as they that are two or three



years of age are very trim, gay, bright-shining and in very good plight and liking, of the colour of Oyl.

But those that have reached to seven years, have layed away all their flannels and smoothness, neither can any man afterwards either by their figure and quality of their bodies, or skins, judge or discern certainly their age (as we say by experience in Horses). For the elder sort of them are rough, hard, thin and lean scrag, harvelings, loathsome to touch and to look upon, somewhat long, not chipping but skin and bone, yet very notorious and goodly to see so, in regard of their gravity, hoariness and antiquity. But as they be in form and shape, nothing so excellent, so yet in experience and industry they far out-strip the younger sort, as those whom time hath made more learned, and length of days joyned with ale, hath sufficiently instructed and brought up in the Art, or trade of Honey-making.

The place likewise altereth one whiles their form, and sometimes again their nature, (as their sex and age do both.) For in the Islands of *Molucca*, there be Bees very like to winged Primises, but somewhat lesser than the greater Bees, as *Maximilian Transylvanus*, in an Epistle of his written to the Bishop of *Salpurga*, at large relateth. *Andrew Thevet* in his book that he wrote of the New-found World, Chap. 51. amongst other matters reporteth that he did see a company of Bees or Honey-bees about a tree named *Phoebejasa*, which then was green, with the which these Honey-bees do live and nourish themselves: of the which trees there were a great number in a hole, that was in a tree, wherein they made Honey and Wax. There is two kinds of the Honey-bees, one kinde are as great as ours, the which cometh not only but of good smelling flowers, also their Honey is very good, but their Wax not so yellow as ours. There is another kinde half so great as the other: their Honey is better then the other, and the wilde men name them *Hika*. They live not with the others food, which to my judgement maketh their Wax to be as black as coals, and they make great plenty, specially near to the River *Vasser*, and of *Plate*. The Bees called *Chalcidides*, which are of the colour of brail, and somewhat long, which are said to live in the Island of *Creta*, are implacable, great fighters and quarrellers, exceeding all others in their stings, and more cruel than any others, so that with their stings they have chased the Inhabitants out of their Cities; the remainder of which Bees do remain and make their Honey-combes (as *Ælianus* saith) in the Mountain *Ida*. Thus much of the differences of Bees; now it remaineth to discourse of the Politick, Ethical, and Oeconomick vertues and properties of them.

Bees are governed and do live under a Monarchy, and not under a tyrannical State, admitting and receiving their King, not by succession or casting of lots, but by respective advice, considerate judgement, and prudent election; and although they willingly submit their necks under a Kingly government, yet notwithstanding they still keep their ancient liberties and priviledges, because of a certain Prerogative they maintain in giving their voices and opinions, and their King being deeply bound to them by an oath, they exceedingly honour and love.

The King as he is of a more eminent stature, and goodly corporature (as before we have toucht) then the rest: so likewise (which is singular in a King) he excelleth in mildness and temperateness of behaviour. For he hath a sting, but maketh it not an instrument of revenge, which is the cause that many have thought their King never to have had any. For these are the laws of nature, not written with Letters, but even imprinted and engraven in their conditions and manners: and they are very slow to punish offenders, because they have the greatest and Sovereign power in their hands. And although they seem to be slack in revenging and punishing private injuries, yet for all that they never suffer rebellious persons, refractorious, obdinate, and such as will not be ruled, to escape without punishment, but with their pricking stings they grievously wound and torment, so dispatching them quickly. They are so studious of peace, that neither willingly nor unwillingly they will give any cause of offence or displeasure. Who therefore would not greatly be displeased with, and hate extremely those *Dionysian* Tyrants in *Sicilia*, *Clearchus* in *Heraclia*, and *Apollodorus* the Thief, Prier and spoiler of the *Cassandrian*? And who would not detest the ungratefulness of those Jew claw-backs, and Trencher-parasites, and flatterers of Kings, which dare impudently maintain, that a Monarchy is nothing else but a certain way and rule for the accomplishing of the will, in using their authority as they list, and a science or skilful trade, to have wherewith to live pleasantly in all sensual and worldly pleasure: which ought to be far from a good Prince, who whilst he would seem to be a Man, he threw himself to be far worse then these little poor winged creatures. And as their order and course of life is far different from the vulgar sort, so also is their birth; for they of the Kingly race are not born after the manner of a little Worm, as all the Community are, but is forthwith winged, and amongst all his younglings; if he finde any of his sons to be either a fool, unhandfome, that none can take pleasure in, rugged, rough, soon angry, fumin or too teafly, ill shaped, not beautiful or Gentleman-like, him by a common consent, and by a Parliamentary authority they destroy, for fear lest the whole Swarm should be divided and distracted into many mindes, and so at length the Subjects undone by factions, and banding into parts.

The King prescribeth laws and orders to all the rest, and appointeth them their rules and measures: for some he straightly chargeth and commandeth, (as they tender his favour, and will avoid his displeasure) to fetch and provide water for the whole Camp. He enjoyneth others to make the Honey-combes, to build, to garnish, and trim up the house well and cleanly, to finish perfectly the work, to finde and allow, to promote and shew others what to do. Some he sendeth forth





Neither are Bees only examples to men of Political prudence and fidelity, but also presidents for them to imitate in many other virtues. For whereas Nature hath made them *Zooz apolita*, that is, creatures living in companies and swarms, yet do they all things for the common good of their own rout and multitude, excepting ever the Drones and Thieves, whom if they take tripping in the manner, they reward with condign punishment. Their houles are common, their children common, their laws and statutes common, and their cuntry common. They couple together without question as Camels do, privily and apart by themselves, which whether it proceed of modesty, or be done through the admirable instinct of Nature, I leave it to the dispute and quaint resolution of those grave Doctors, who being laden with the badges and cognizances of learning, do not stick to affirm that they can render a true reason even by their own wits, of all the causes in nature, though never so obscure, hid and difficult.

Flies and Dogs do far otherwise, whose impudency is such, that having no regard of times, persons, or places, they will not give place, or be disjoynd. Yea the *Massagers* (as *Herodotus* writeth) having their quiver of arrows on their carts, they dealt with their wives very unseasonably, and though all men beheld it, yet they most impudently contemned it. And that which is worse, this beastly fashion is crept amongst the usurers, or at least professors of the Christian name, who shame not openly to kiss and embrace, yea even to play and meddle with filthy whores and brothely quens. Bees surely will condemn these kinde of people of beastial impudency and wanton shamelessness, causing them to blush if they have any grace, will teach them repentance. Neither are they altogether such creatures as cannot endure or away with musick, (which is the Princes of delights, and the delight of Princes) as many unlearned people cannot, but are exceedingly delighted with tune in any harmony wherein is no jarring, so the lame be simple and unaffected.

And although they have not the skill to dance according to due time, order and proportion in Musick, as they say Elephants can, yet do they make swifter or slower their flight, according to the Trumpetors minde, who with his sharp and shrill sound causeth them to belier themselves more speedily; but beating slowly and not so loud upon his brazen instrument, maketh them more slow, and to take more leisure. Neither hath Nature made them only the most ingenious of all living creatures, but by discipline hath made them tame and tractable. For they do not only know the hand and voice of the Honey-man, or him that hath the charge and ordering of the same, but they also suffer him to do what liketh him best: which every man must needs confess to be an argument of a generous and noble disposition, thus to undergo the rule of their Over-seers and Surveyors, but the land and discipline of a stranger they will by no means endure.

As for oeconomical virtues they excel also, and namely for moderate frugality and temperance, not profusely and prodigally wasting and devouring the great store of Honey which they gathered in the Summer season, but they sustain themselves therewith in Winter, and that very sparingly. And so whilst they feed upon few meats, and those of the purest sort, they purchase long life, the reward of sobriety.) Neither are they so niggardly and sordidly minded, but whereas they have gathered more Honey than their number can well spend, they communicate and impart some very liberally amongst the Drones. As for their cleanliness these may be certain arguments, that they never exonerate nature within their hives, (except constrained thereto by some sickness, foul weather, and for some urgent necessity) that they convey away the dead carcases, that they touch no rotten nor stinking flesh, or any other thing, no herb that is withered, nor no ill smelling or decayed flowers.

They kill not their enemies within their hives, they drink none but running water, and that which is thoroughly defecated: they will not dwell in houses impure and foul, stutish, black, or full of any feculent or dreggy refuse, and the excrements of the labourers and sickly, they gather on a heap without their pavilions, and as soon as their leisure serveth it is carried clean away. Concerning their temperance and chastity, (although it hath been partly touched before,) yet this I will add, that it is wonderful what some men have observed. For whereas all other creatures do complain the open sight of men, the Elephant only excepted, and Wasps likewise not much differing in kinde, do the same: yet Bees were never yet seen so to joyn together, but either within their hives very modestly they apply themselves to that business, or else abroad do it without any witness. And they are no less valiant then modest and temperate, *Dum corpora bello obstant, pulcherrimum periculum mori.* Their war is either civil or forain. Of the former there be divers causes, that is to say, the multitudes of their Dukes or Captains lying in wait to betray both King and Kingdom: scarcity of victual, straightness of place and room, corruption of manners and idleness. For if they have no Dukes, then it is expedient (as other whiles it happeneth) they slay the same, lest the number of them growing too great, either violence might be offered to the King, or the Common drawn to some sedition.

They kill them most of all, when as they have no great store of young Bees to plant any new Colonies, overthrowing and spoiling withall their Honey-combs (if they have any.) They execute also Thieves and Drones, so often as they have not room enough to do their business in, (for they build the more inward part of the Hive,) so taking from them at one time, both their Honey-combs and meat. The scarcity and lack of Honey, causeth them also to be at deadly feud, so that the short Bee do encounter the long with might and main. In the which hickering, if the short be Conqueror, it will be an excellent Swarm, but if fortune smile on the long Bees side, they live idly, making never any good Honey. Whosoever getteth the day, they are so given to rapine and ravenous

venge, as they take no prisoners, nor leave any place to mercy, but commit all to the sword.

Now concerning their forain wars, I must say they give place to no other living creature, either in fortitude, or hardy venturing: and if either men, four-footed beasts, birds, or Wasps, do either hinder, disquiet, or kill any of them, so that they be not well contented, against all these they oppose themselves very stoutly, according to their power wounding them. They hate extremely adulous persons, and such men as be smeared with any Ointment, those that have curled or crisped hair (as also all unfaithful and base raskally people) and all those that wear any red clothes of the colour of blood: as contrariwise they love and reverence exceedingly their Masters, Keepers, Tutors, Defenders, and Maintainers: so that sitting upon their hands, they do rather tickle and lick them in sporting wile, then either wound or hurt them, though never so little with their sting. Yea these men may safely without any touch of hurt, and without any covering to their hands, gather together the swarms in a very hot Summer: yea, handle, place them in order, heap up together, sit or stand before their Hives, and with a luck take clean away Drones, Thieves, Wasps, and Hornets.

If any Souldier loseth his sting in fight, like one that had his Sword or Spear taken from him, presently is discouraged and despaireth, not living long, through extremity of grief. Going forth into the field to fight, they stay till the watchword be given, which being done, they flock in great heaps about their King (if he be a good one) ending all their quarrell in one set battel. In their order of fighting, how great virtue, courage, strength, and nobleness these poor creatures shew, as well we our selves can testify, and they better who have assured us by their writings, that whole Armies of armed men have been tamed by the stings of Bees, and that Lions, Bears, and Horses, have been slain by means of them. And yet (how fierce and warlike soever they seem to be,) they are appeased and made gentle with continual or daily company, and unless they be too much nettled and angered, they live peaceably enough without any great trouble, never hurting any one maliciously or deceitfully, that standeth before their Hives. If I should go about to declare at large their ingeny, natural inclination, cunning workmanship and memory; I should not only give unto them with *Virgil* *Petulum aura divine*, but also *haustus mentis aethera*, and (*licet Pythagoricè errare*,) the *Mentisobolus* of that ingenious Philosopher. For after that they are inclosed in a clean and a sweet dumy and tough, (called of the *Latines*, *Campesi*, and of the *Greeks*, *Mili*), especially from Elms, Willows, Cases or Reeds, yea even from bones; and this they lay for the first foundation of their work, so covering it all over as with a hard crust at first, bringing to it afterwards another layer of *Pissone*, which is a kinde of juyce of Wax and Pitch, made with Gum and Rosin, and over that again they lay *triplic*, which we call Bee-glew.

In this lame three-fold stile, and sure ground-work thus artificially begun, they do not only laugh to scorn, jest at, and mock the eyes of the over-curious spectators of their Common-wealth and works, but that which no man considers, they do hereby defend both themselves and theirs, against rain, cold, small vermin and beasts, and all their enemies. Then after this they build their Combes; with such an Architectonical prudence, that *Archimedes* in respect of them seems to be no body. For first of all they set up the cells of their Kings and Princes in the higher place of the Honey-combes, being large, fair, sumptuous, stately and lofty, being cunningly wrought, of the most tried, purest and refined Wax, trenching them round for the greater defence of the Regal Majesty with a mound and enclosure as it were with a strong Wall, Bulwark, or Rampire.

And as Bees in regard of their age and condition, are of three sorts, so likewise do they divide their Cells: for to the most ancient they appoint houses next to the Court, (as those that are the fittest to be of his privy Council, and guards of his Person) next to these are placed the young Bees, and those that he but one year old. And they of middle years and stronger bodies, are lodged in the uttermost rooms, as those that are fittest and best able to fight for their King and Countrey. Yet *Arifule* saith, that Bees in the making of their Tents or Cells, do first of all provide for themselves, and next for their King and his Nephews, and lastly for the Drones. And as in the fabrication of their Honey-combes, they make the fashion according to the magnitude and figure of the place, fashioning it either octigular, long, square, sword-like, or foot-like, &c. according to their own liking, running out sometimes in length eight foot: so their little Cells contrariwise are framed after a certain form in a Geometrical proportion and measure; for by rule they are justly Sexangular, and capable enough to hold the tenants.

The whole Combe containeth four orders of Cells, the first the Bees occupy; the next the Drones possess; the third, those that are called of the *Greeks*, *Chadones*; of the *Latines*, *Apum* (*solites*, call them if you please *Sobadones*.) The last is appointed for the room of Honey-making. There be some who constantly aver, that the Drones do make combs in the same hive the labouring Bees do, but that they lack the skill and power of mellification, it being uncertain whether this comes to pass either through their grossness and big-bellied fatness, or through their staid and natural laziness. And if through the weightiness of the Honey the combs begin to shake and wag, and to lean and bend as though they were ready to fall, then do they rear them up, their business, and execute their charges, (for it is necessary that to every combe there be a ready way.)





Further this is to be added, that the Drone is of a more shining black colour than the true labouring Bee; he is also greater than the greatest, without sting, sluggish, idle, Nothfull, without heart or courage, cowardous, and unapt to war, not daring to venture life and limb in manly Martial trade, as the true legitimate Bees will.

Aristotle saith, that they breed and live amongst the true Bees, and when they fly abroad, they are carried scatteringly, here and there aloft in the air as it were, with some violence or tempest: so exercising themselves for a time, they return from whence they came; there greedily feeding: so exercising themselves for a time, they return from whence they came; there greedily feeding upon the Honey. Now why the Drones may be compared with the Dukes and Princes, in respect upon the Honey. Now why the Drones may be compared with the Dukes and Princes, in respect of their corpulence, and Bees like unto them in their sting, let us hear Aristotle reason. Nature of would (saith he) there should be some difference, lest always the same stock should encrease one of would (saith he) there should be some difference, lest always the same stock should encrease one of another confusedly, without order or consideration, which is impossible: For so the whole flock would either be Dukes or Drones. And therefore the true Bees in strength and power of engendering, and breeding, are comparable to their Dukes, and the Drones only in greatness of body dring, and breeding, are comparable to their Dukes, and the Drones only in greatness of body resemble them: to whom if you allow a sting, you shall make him a Duke. These Drones further of the Grecians are called *Cathoroi*, because he putteth not forth any sting: whereof *Hesiodus* hath these Verses thus interpreted;

Arist. l. 3. de gener. Anim. c. 10.

Huc vero Dii succedunt & homines quicunque utrosque  
Vivunt, sicut aculeo carentibus similes studio,  
Qui apum laborem absuntant otiosi

Varantes.

In English thus;

Both God and men disdain that man  
Which Drone like in the hive,  
Nor good, nor ill, endeavour can  
Upon himself to live,

But idle is, and without sting,  
And grieves the labouring Bee  
Devouring that which hee brings,  
Not yielding help or fee.

So that either he hath no sting at all, or else maketh no use of it for revengement. *Phylastius* saith, that they are stinglesse, and would have them called imperfect Bees, and the famous Poet *Virgil* styleth them, *Ignavum pecus*: that is, idle, and unprofitable, good for nothing. *Catullus* calleth them a race or flock of a larger size, very like unto Bees, and accounteth them very apt to be placed in the rank of ordinary sorts of Creatures, of the same kinde and company with Bees. They suffer punishment and are scourged many times in the whole Bee common-wealth, not only for pretence of idleness, gluttony, extortion, and ravenous greedinesse, to which they are too much addicted; but because lacking their sting, and by that defect, being as it were emasculated, they dare not shew themselves in publick.

*Pliny* doth not expresse their nature and quality. The Drones are stinglesse and so to be reckoned imperfect Bees, and of the basest sort, taking their Original from rited and worn out Bees, and such as be past labour and service, living only upon a bare pension: we may call them the very slaves and bond-men of the true Bees, to whom they owe all due homage and subjection, wherefore they exercise their authority over them, thrusting them first out of doors by head and shoulders, like a company of drudges to their work; and if they be anything negligent, not belabouring themselves quickly and lively, they give them correction, and punish them without all pity and consideration. For in the month of June, two or three Bees (especially of the younger sort) will hale out of the Hive one Drone, these beating of him with their wings, pricking and tormenting him with their stings, and if he offer any resistance to their Lordly rule, then they violently cast him down from the shelf or Rep whereon he holdeth, down to the earth as though they would break his neck. Thus when they have glutted their wills, and punished him at the full, they at length put him to a shamefull death; all which we have often beheld, not without great admiration and pleasure.

Sometimes the Drones remain like banished persons, before the entrance of the Hive, and dare not venture to presell. For three causes specially the Bees do drive and cast out the Drones: either when they multiply above measure, or when they have not place enough left for their labour; or that they be pinched with hunger and famine, for lack of Honey. And as they carry a quarrel against the Drones, so to make it more apparent, they will not hurt such persons as offer either to take away with their bare hands any of the Drones, and to cast them away, yet though they be in the greatest heat of their rage. *Aristotle* in his ninth Book, *De Animalibus*, Cap. 48 affirmeth, that Bees are engendered apart one from another, if their Captain (which is their King and Captain) will; and that they breed in the Bees Cells, and that of all others of this kinde, they are the most noble and courageous.

Their generation.

The young Drones are bred without any King; but the true younger Bees never: for they do receive their Original and pedigree from the Kingly stock. Some say that the young Drones reach their Original from the power of the herb *Cannab* (described by *Pliny*, which is a kinde of Honey suckle, having the taste of the Honey and Wax together) from the Olive tree and Reed, but this opinion is weakly grounded, and standeth upon small reason. *Aristotle* affirmeth, that they proceed from the longer and bigger Bees; yet, and those that are termed Thieves: which without question he received either from the ancient Philosophers, or

Some others that had the charge and were skilful of ordering Honey, that lived in his time. Some will have them to breed and come from putrefaction, as *Isidore* from sinking and putrefied Mules: *Cadan* from Asies, *Plutarch* and *Servius* from Horses. Other some are of opinion, that they first proceed of Bees, and that afterwards they degenerate baldrlike from them, after they have lost their stings, for then they become Drones: neither are they afterwards known to gather any Honey, but being as it were deprived of their strength, they grow effeminate, ceasing either to hurt, or to do any good at all.

Some again hold the contrary side, assuring us upon their knowledge, that the true labouring Bee fetcheth his beginning from the Drone, because long experience (the Mistress of Wisdom) hath taught us, that there is yearly known to be the greater swarm, when there is the greater multitude of Drones. But this to me seemeth rather the devise and invention of some curious brain, then any true grounded reason. For because that many Drones breed (as it cometh always to passe in good and plentiful years) therefore there should be greater swarms, is no good consequent: but contrariwise, because the multitude of Bees do greatly increase through the moderatenesse of the pure air, and the plenty of the Honey-dropping dew, and through the abundance of this mellissious moisture, there must needs follow a greater foison and store of Drones: as the Philosopher hath well observed. But admit that this be true, that whereas there is the greater encrease of Drones, there should yearly ensue the more swarmings: yet must we not thereupon conclude, that Bees do owe, and ought to ascribe their first original from Drones, but rather that they are indebted and bound in honesty to the Drones, because in time of breeding, they give much warmth and comfort to their young, (as *Pliny* lib. 11. c. 11. saith) conferring upon them a lively heat, fit for their encrease and prospering. Some divide them into male and female, and that by coupling together they make a propagation of their kinde, although (as *Athenus* writeth) neither Drones nor Bees were ever yet seen of any one to couple together.

But whereas Wasps, Hornets, and other Cut-waisted creatures that make any combs, and breed in the same, have been sometimes (though seldom) seen, both by us and *Aristotle*, to joyn together, I can surely see no cause why we should utterly take from them the use of *Venus*, though in that respect they be very modest and moderate.

I have before in the discourse of their generation, said, that the Bees do make the male kinde, and the Drones to be but the female; but sith that in the Honey-making, they punish them so sharply after they have ejected them from possession first, so that afterwards they put them to death, I can hardly be induc'd to believe that the Drones are but the female kinde, considering that one thing would eclipse and overcast all those refulgent virtues which all men know to be in Bees, to deal thus cruelly with their Parents. To what use therefore serve they in Hives? Seeing *Virgil* in the fourth book of his *Georgicks* thus describeth them;

Immunique sedens, aliena ad patula fovea.

That is to say;

The Drones as free and bold doth sit,  
And wast of others food commit.

Where *Festus* taketh *Immunis*, for lazy, idle, unserviceable, unprofitable, and such as are nothing worth, except per chance after the guise of wicked men, they so serve their own turns, as to live by the sweat of other mens labours, and to bring out of order, or utterly seek to overthrow the whole frame of the Common-wealth.

But the most approved Authors set down divers good use of Drones. For if there be but a few of them among the Bees, they make them the more careful about their affairs, and to look more duly to their task: not by their good example, (for they live in continual idleness) but because they might continue their liberality towards strangers, they work the more carefully in their Honey-shop. And (if *Barbolenus* do not deceive us) these Drones be not altogether idle: but they employ themselves about the building of the Kings Houle, which they make large, stately, and very sumptuous in the higher and middle part of the combs, being very fair to see in respect of their covering.

So then they are but lazy, in respect of Honey-making and gathering: but if you look toward their Art or Science of building, they are to be accounted excellent devisers of the frame and chief Masters of the whole work. For as the Bees do fashion out the combs of the Drones nigh the Kings Palace: so again, for the like counterchange of kindenesse, the Drones are the sole inventors, and principal work-masters of the Kings Court; for which cause both they and their off-spring, kinsmen and friends, (if they have any) are bountifully rewarded of the whole stock of Bees, by giving them frankly and freely their diet and maintenance which costeth them nothing. The Lockers or holes of the up-grown Bees, are somewhat too large, if you respect the quantity of their bodies, but their combs lesser; for those they build themselves, and these other are made by given to such vile labourers and hirelings, as was due to their own sons and daughters, and those that are naturally subjects.

And some other *Greeks* do besides affirm, that the Drones are the Bees Butlers or Porters to carry them water, ascribing moreover to them a gentle and kindly heat, with which they are said to keep warm, cherish and nourish the young breed of the Bees; by this means as it were, quickning them, and adding to them both life and strength.

K k k

The









Alens wife.

especially when after the manner of venomous creatures, they have infected their flings either by tasting the flesh of some Serpents, or by gathering their food from venomous plants.

I will now set before your eyes and ears one late and memorable example of the danger that is in Wasps, of one *Alens* wife, dwelling not many years since at *Lowick* in *Northamptonshire*, which poor woman resorting after her usual manner in the heat of the Summer to *Drayton*, the Lord *Mildons* house, being extremely thirsty, and impatient of delay, finding by chance a black Jack or Tanard on the Table in the Hall, the very inconsiderately and rashly set it to her mouth, never suspecting or looking what might be in it, and suddenly a Wasp in her greediness passed down with the drink, and stinging her, there immediately came a great tumor in her throat with a redness puffing and swelling of all the parts adjacent; so that her breath being intercepted, the miserable wretch whirling herself twice or thrice round, as though she had had some Vertigine in her brain, presently fell down and dyed. And this is known for a truth, not only to me, but to most of the inhabitants thereabouts, being as yet fresh in their memories, and therefore their authorities as I take it, is unreprieveable.

Salomon.

Now, for fear lest I should lose my self in this troublesome and vast Ocean of Natures admirable fabricature, I will now discourse of such medicinal means, as will defend from their furious malice. The virtue of Mallows, and of *Althea*, (called Marsh-mallow) is notable against the prickings of Wasps. For the softest and most emollient herb, is applied as a contrary to a warlike and hurtful creature, whose juice being anointed with Oyl, either abateth the rage of Wasps, or so bluneth and dulseth their sting, that the pain is not very sharp or biting. *Pliny lib. 21. capit. 171.* And of the same kinde is *Avien*: Wasps (saith he) will not come near any Man if he be anointed with Oyl and the juice of Mallows. For as a soft answer doth *frangere iram*, and as the *Grecians* have a saying, *Edm Megiston estin orget pharmakon logos*: So also in natural Philosophy we see, that hard things are quailed, and their edge even taken off with soft and suppling: as Iron with a fine, small, and soft feather, the Adamant stone with bloud, and the sting of Wasps, Hornets and Bees, with Oyl and Mallows.

What is softer then a Caterpillar? yet if *Aetius* credit be of sufficiency, the same being beaten with Oyl, and anointed upon any part preserveth the same from the wounds and stings of Wasps. And of the same virtue is the herb called Balm, being stamped and mixed with Oyl. The same And of the same virtue is the herb called Balm, being stamped and mixed with Oyl. The same symptoms or accidents do follow the stinging of Wasps, as of Bees, but far more painful, and of longer continuance, to wit, redness, and intolerable pain, and Apoplexies. And if any be stricken of the Orange or yellow coloured Wasps, especially in a sinewy or some sensible part, there will follow a Convulsion, weakness of the knees, swooning, yea, and sometimes death, as before I have touched.

The curation of their stings.

Gilbertus Anglus.

Against the stinging of Wasps divers medicines are prescribed by Physicians, but I will speak of such only as I have made proof of, and such as are confirmed by long experience. *Gilbertus Anglus*, saith, that Wasps being bruised and applied to the place affected, do cure their own wounds very strangely. The same virtue peradventure, not only the Scorpion, but the greater part of Insects have, if any one would make any diligent trial thereof. If a man be stung of any venomous Wasps (which is easily known by the blewness of the place, madnesse, raving and humming of the party, and coldness of the hands and feet) after you have given him inwardly some alexipharmack medicine, the place agrieved must be lanced, or rather opened with a Cautey, so being thus enlarged and opened, the venom must be well sucked out, and the paring or shaving of that earth wherein the Wasps build their nests, must be wrought and kneaded with Vinegar, and so applied like a Cataplasme.

Haly Abbas.

A plaister also made of Willow-leaves, Mallows, and the combe of Wasps, is very medicinable for the same, as by the counsel of *Haly Abbas* I have experimented. The *English* Northern men do prepare most excellent emplaster worth gold, against all stings of Wasps, only of that earth wherof their Ovens are made, having Vinegar and the heads of Flyes commixed therewith. Let the place be very well rubbed with the juice of Citrals, and withall, let the party that is pained drink of the seed of Marjoram beaten to powder the quantity of two drams: or thus, Take of the juice of Marjoram two ounces of Bole Armony two drams, with the juice of unripe Grapes so much as is sufficient, make an emplaster. Another. Anoint the place with the juice of Porcelaine, Bees, or sweet Wine, and Oyl of Roses, or with Cows bloud, or with the seeds of the Spirting or wilde Cucumber (called *Noli me tangere*) beaten with some Wine. Thus far *Galen*. Barley Meal wrought up with Vinegar, and the Milk or juice of a Fig-tree, Brine, or Sea-water, are excellent for these griefs (as *Disforides lib. 8. cap. 20.* writeth) if the wound be often fomented, bathed, or soaked with any of them. To drink, give two drams of the young and tender leaves of Bays with harsh Wine, and if them. The part affected be only anointed with any of these, they are much available. In like sort the decoction of Marsh-mallows drunk with Vinegar and water, are much commended, and outwardly mixt with Calves fat: Oyl of Bays draweth out the poison of Wasps. The leaves of Marsh-mallows (as *Aetius* saith) being bruised and applied, do perform the same.

The juice of Rue or Balm, about the quantity of two or three ounces drunk with Wine, and the leaves being chewed and laid on with Honey and Salt, or with Vinegar and Pitch, do help much. Water-creffes, Rosemary, with Barley meal, and water with Vinegar sod together, the juice of Ivy leaves, Mirigolds, the bloud of an Owl, all these are very effectual against the stings of Wasps: as *Pliny lib. 31. cap. 9.* telleth us; the buds of the wilde Palm-tree, Endive with the root, and wilde

Thyoe

Thyme being applyed a plaister-wise, do help the stinging of Wasps. After the venom is drawn out by sucking, the place affected must be put into hot water the space of an hour, and then suddenly they must be thrust into Vinegar and Brine, and forthwith the pain will be asswaged, the tumor cease, and the malice of the venomous humor clean extinguiished. *Rhazes* saith, that the leaves of Nightshade, or of Senegreen, do very much good in this case. And in like sort Bole Armony with Vinegar and Camphire, and Nuts beaten with a little Vinegar and Camphire.

Also take the Combe with Honey applying to the place, and hold the grieved place neer the fire immediately, and laying under them a few ashes, binde them hard, and forthwith the pain will be swaged. *Serapio* saith, that Savory, or Cresses applied; and the seed thereof taken in drink, and the Serapio. the juice of the lesser Centory mixt with Wine, are very meet to be used in these griefs; he also commendeth for the same purpose, the leaves of Basil, the herb called Mercury, and Mandrakes, with Vinegar. *Aetius* is of opinion, that if you take a little round ball of Snow, and put it into the fundament, the pain will cease, especially that which proceedeth by Wasps. Let the place be anointed with Vinegar and Camphire, or often fomented and bathed with Snow-water. Take of Opium, of the seed of Henbane and Camphire, of each alike much, and incorporate them with Rose-water, or the juice of Willows, and lay it upon the wounded place, applying on the top a linnen cloth, first thoroughly wetted in wine. *Johannes Mesia* (who of some is called *Evangelista medicorum*) prescribed this receipt of the juice of *Sisymbrium* two drams and a half, and with the juice of *Tartarum* make a potion. The juice also of *Spina Arabica*, and of Marjoram are nothing inferior to these forementioned. *Aaron* would in this grief have water Lintels (called by some Ducks meat) to be anointed with Vinegar, and after to be applied.

*Constantine* assureth us, that *Alome* tempered with Barley meal and Vinegar, and so bound to the place, as also Nuts, leaves of Wall-nuts, and Bleets, are very profitable in this passion. Item, apply very warm to the wound a Spiders web, bruised with a white Onion, and sufficient Salt and Vinegar, will perfectly cure it. *Gul. Placemius* will warrant, that a plate of cold Iron laid upon the wound, or Lead steeped in Vinegar, will do the deed. *Gordanius* counsel is to rub the place with Sage and Vinegar, and afterwards to foment it with water and Vinegar sod together. *Varignana* would have us to apply Chalk in powder, and inwardly to take the seeds of Mallows boiled in Wine, Water, and a little Vinegar.

*Matthiolus* much commendeth Sperage being beaten and wrought up with Honey, to anoint the place. Likewise flies beaten and anointed on the place, winter Savory, Water-creffes, with Oyl of *Mentha*, give most speedy help. *Arnoldus Villanovanus* assureth us, that any fresh earth, especially Fullers earth, is very available, and the herb called *Poley*, used as an Unguent, or else Goats milk. And *Martellus Empiricus* is not behind his commendations for the use of Bullocks dung, to be applied as a poultice to the stung part.

These and many others may any Man ascribe that hath had but an easie taste of the infinity of Physicks speculation; for the store-house of Nature, and truly learned Physicians, which way soever you turn you will minister and give sufficient store of alexiterial medicines for the expelling of this grief. In conclusion one and the self same medicament will serve indifferently for the curation of Wasps and Bees, saving that when we are stung with Wasps more forcible remedies are required, and for the hurts that Bees do us, then weaker and gentler are sufficient. In the hundredth and ninth year before the birth of our blessed Saviour, an infinite multitude of Wasps came flying into the Market place at *Copay*, (as *Julius* witnesseth) and lighted on the Temple of *Mars*, all which when with great regard and diligence they were gathered together and solemnly burnt, yet for all that they prefignified the coming of an enemy, and did as it were fore-tell the burning of the City, which shortly after came to passe. And thus much for the History of the Wasp.

## OF HORNETS.

A Hornet is called of the Hebrews, *Tjrah*. Of the Arabians, *Zabor*, and *Zambor*. Of the Germans, *Ein bornass*, *Horitz*, *Frisla*, *Oferizwable*. Of the Flemings, *Horset*. Of the Frenchmen, *Trelon*, *Falotin*. Of the Italians, *Calauron*, *Crabrone*, *Staraffon*, and *Galaurn*. Of the Spaniards, *Tabarros* & *Mosander*. Of the Egyptians, *Irsen*. Of the Sclavians, *Irsen*. Of us Englishmen, Hornets, and great Wasps. The Grecians call them *Ambrenas*, and *Ambrenas*, because with their sting they raise an *Ambra* or Carbuncle, with a vehement inflammation of the whole part about it. The Latines call them *Crabron*, peradventure of *Crabra*, a Town so named in the Territory of *Tusculanum*, where there is great plenty of them: or it may be they are termed *Crabrones* of *Callabon* (a Horle) of whom they are first engendered: according to that of *Ovid*, 15. *Metamorphos*.

*Pressum humo bellator equus Crabronis origo est.*

That is to say;

When War-horse dead upon the Earth lies,

Then doth his flesh breed Hornet flies.

*Albertus* teacheth a Hornet *Apis citrina*, that is a yellow or Orange coloured Bee. *Cardan* teacheth much to prove that dead Mules are their first beginners. *Plutarch* is of opinion, that they first

Their description.

first proceed from the flesh of dead Horses, as Bees do out of a Bulls belly: and I think that they have their breeding from the harder, more firm and solid parts of the flesh of Horses, as Wafps do from the more tender or soft. Hornets are twice so great as the common Wafps, in shape and proportion of body much resembling one another. They have four wings, the inward not being half so large as the outward, being all joyned to their shoulders, which are of a dark, brownish, and of a Chestnut-like colour, these wings are the cause of their swift flight: they have also six feet of the same colour and hew, that their breast and shoulders are of. There is somewhat long, of the colour of Saffron, their eyes and looks are hanging or bending downwards, crooked and made like a half Moon, from which grow forth two peaks like unto Siches or two fickle, nothing varying in colour from their feet. Their belly is as though it were tied to their shoulders with a very fine thread, the forward and middle part whereof is overset with a brown colour, and begins as it were with a girdle of Saffron. The hinder part is altogether yellow; easily discerned and remarkable for those brown pricks or specks, every one of them being much like unto a small triangle, besides they have certain clefts or flits on both sides, both before and behind, by which they can at their pleasure when they list, either shrink up themselves, or draw and gather themselves together, and with the same again lengthen and stretch out their bodies. They have also near to their belly on both sides four black spots, and in their tail they are armed with a strong piercing Ring, and the same very venomous. They make a sound or a buzzing strange noise, more hideous and dreadful than Wafps do. They are shrewd, fierce and cruel, quickly angry and wrathful, and although they live in companies together, yet notwithstanding they are ever known to be but of an homely, rude, curst, and untractable disposition and nature, and will never be brought by any Art or fashioning to lay aside their uplandish wildness, (as some herbs will do that are transplanted into Gardens.)

They are besides this of such a mischievous malignity and venomous quality, that as some affirm, nine of their stings will kill a Man, and three times nine will be able to kill a strong Horse; especially at the rising of the Dog-star, and after, at which time they have a more fiery, balsty, and inflaming nature, and men at that season, by reason of their large exaltation and sending forth of spirits, grow more weak and faint.

And therefore it is no marvel though in holy Scripture, they are compared or likened to most fierce and cruel enemies, which should put and cast forth the *Canaanites, Philistines, and Chelites*, Exod. 23. 28. So likewise *Ovid* in the eleventh Book of his *Metamorphosis*, hath these words, *Spiculae enim ardentes*, The burning stings of Hornets: And *Virgil* in the fourth Book of his *Georgicks*, calleth them *Asperum*, most sharp and violent. *Terence* (the most eloquent of all Comical Poets) in his Comedy intitled *Phormio*, and *Plautus* in his *Amphitryo*, have this Proverb, *Irritum crabronem*, I have provoked or incensed the great Wasp to anger: which I suppose they used as a by-word against the properties, natures, and forward behaviours of women, who being in their wonted fume mood, if once you go about to overthwart them, or a little to contrary their wilfulness, you shall pull an old house over your own head by a further provocation, and perhaps if you get you not the sooner out of their sight and reach of their clutches, you may chance have somewhat more flying about you ears then you would.

It is good therefore if you have a Wife, that is *Calcat imitator hydra*, unquiet and contentious, to let her alone, not to wake an angry Dog: and when a mischief is well quieted and brought asleep, to go your ways and say never a word. Whereas among Bees, their Drones and Kings do want stings; yea, and some Wafps too, as before I have writ: yet notwithstanding all Hornets in general, as well the greater sort of them that build their houses in trees, as the lesser sort that dwell in the earth, are provided of stings, neither do their Ring-leader seem to be unarmed. For Wafps have their P. efidents of their own society, and their Captains general as well as Bees and Wafps, whatsoever *Pliny* lib. 11. cap. 21. dream to the contrary: which in proportion and quantity are greater (if you respect the bodies of other Hornets) then either the Captains of the Bees and Wafps are in comparison of their subjects. These also spend their time within doors, as the Captain of Wafps do, not having many but one head to guide and rule over them, lest by banding into parties and factions, some civil war (wherein all things are miserable, as *Tully* saith) or other mutiny might arise to their final destruction. They are great vexers and troublers, and even like such as had sworn the death of their enemies, robbers, and thieves: And yet at home they nourish peace, excelling even the very Bees themselves in their painful, earnest, and willing desire to maintain their flock and common society.

For neither do they chide, braw, or contend, nor yet make any stir or rustling when any is promoted to any office or place of preferment in their corporation: neither are they distracted into divers mindes with their business, neither yet do they raise any tumult, make any uprore, or keep a coil or rustling at the election of their Prince and Captain general, but with common consent they use but one Table, taking their commons together like good friends and fellows, and whatsoever they kill, they carry some part of it home, frankly imparting it to their neighbors, children, and companions.

Neither do they yearly drive and expel forth of the doors to seek new habitations, where they can, (as some Bees deal very churlishly and unnatural with their young) but they contrariwise in their houses defend and keep warm their new sprung up progeny and race, building for their greater Houses, and raising of more Sellers and stores, bording and planking the same in case of necessity, never ceasing till they be fully reared and made fit for defence and safety. But as for their King

King and Captain (whom they exceedingly honor and highly esteem) they make choise of such a one, as neither seemeth to be a King without a Kingdom, nor a Prince without people and possessions, and yet he so beavereth himself, and carryeth himself so evenly, as though he had but little to do in this his Empire. And yet in largeness of body and greatness of his heart, in Routness and stateliness of stomach and person, he staineth all the rest, carrying away the prize from them all: and when there is Proclamation of War to be made against any forain foes, and that their flags and ancientes be displayed by sounding his deadly blade, he giveth defiance to his enemies, most courageously bestirring himself more then any of his followers; shewing himself both most vehement, warlike, and skilful in fight, and yet again at home towards his subjects, (like a true noble spirit) he is very gracious, gentle, and temperate, tractable, easie to be intreated, and most ready to forgive. They make for themselves certain holes or dwelling places under the ground, casting forth the earth much after the fashion of Bismires: for you must understand that neither Wafps nor Hornets do send forth any Swarms as Bees do, but those young Hornets which spring from them now and then, do there remain among their breeders, making their beds or hives much greater, by means of the earth formerly cast out.

They enlarge their combs exceedingly, by adding more and more unto them, so that of a strong and healthy flock of Hornets, it hath been known they have gathered three or four trays or baskets full of combs. If any Hornets stray from their own home, they repair to some tree, and there in the top of it make their combs, so that one many times may very easily and plainly perceive them, and in these they breed one Captain General, or great Commander, who when he is grown to be great, he carryeth away the whole company, placing them with him in some convenient lodging. Wild Hornets (as *Pliny* saith) do live in the hollow trunks or cavities of trees, there keeping themselves close all the Winter long, as other Cut-wafps do.

Their life is but short, for they never exceed the age of two years. Their combs are wrought with greater cunning, more exquisite Art, and curious conceit, then those either of Wafps or Bees, and these excellent devils do make them one while in the trunks of trees, and sometimes again in the earth, encasing them at their pleasure with more floors and buildings, according to the encrease of their illne, making them smooth and bright, decking and trimming them with a certain tough or binding fluge or gelly gathered from the gummy leaves of plants. Neither do any of the little mouths or entries of their cells look upwards, but every one bendeth downwards: and the bottom is placed upwards, lest either the rain might soak through them in long showers, or the head of them being built upwards, they might lie open and be the more subject and exposed to the unruly rage and furious blasts of windes and storms.

If you eye well their nests, you shall finde them all for the most part exactly sexangular or six cornered, the outward form and fashion whereof is divided with a murry-coloured partition: and their ambiguous substance is much like unto the rinde or bark of Birch, which in the parching heat of Summer cleaveth and openeth it self into chaps. The stinging of Wafps is for the most part accompanied with a Fever, causing withal a carbuncle, swelling, and intolerable pain.

I myself being at *Duckworth* in *Huntingdonshire*, my native soyl, I saw one time a great Wasp or Hornet making after, and fiercely pursuing a Sparrow in the open street of the Town, who at length being wounded with her sting, was presently cast to the ground, the Hornet satisfying her self with the sucked blood of her quelled prey, to the exceeding admiration of all the beholders and considerers of this seldom seen combate. *Ariftole*, whom I so greatly reverence, and at whose name I do even rise and make curtesie, knows not of a surer how Hornets do engender, nor after what manner they bring forth their young breed. But since we are assured of this, that they bring forth their young by the sides of their Cells, as Wafps and Bees, we need not doubt, but that they do all other matter after their manner, and if they couple together, they do it by night, as Cats do, or else in some secret corner, that *Ariftole* with his hundred eyes can never espie it.

Hornets gather meat not from flowers, but for the most part they live upon flesh, whereby it cometh to passe, that you shall often finde them even in the very dung-hills, or other ordure. They also prooveth great Flyes, and hunt after small Birds, which when they have caught into their clutches, after the manner of hungry Hawks, they first wound them in the head, then cutting it asunder, or parting it from the shoulders, carrying the rest of the body with them, they betake themselves to their accustomed sight. The greater sort of them die in the hard Winter, because they store not themselves sufficiently aforehand with any sustenance as Bees do, but make their provision but from hand to mouth, as hunger enforceth them, as *Ariftole* enforceth us. In like sort *London* hath well observed, that Hornets both day and night keep watch and ward besides the hives of Bees, and so getting upon the poor Bees backs, they use them instead of a Waggon or carriage: for when the silly Bee labourereth to be discharged of his cruel Sitter: the Hornet when he hath sucked out all his joyce, and clean bereft him of all his moisture, vigour and strength, like an unthankful Goat and the most ingrateful of all winged creatures, he spareth not to kill, and eat up his fosterer and chief maintainer.

They feed also upon all sweet, delicious, and pleasant things, and such as are not untoothsome and bitter, and the Indian Hornets are so ravenous, and of such an insatiable gluttony, (as *Ovid* doth reporteth) that they lie upon Oyl, Butter, greasie Cooks, all sorts of sharp lawce used with meats, and all moist and liquid things, not sparing the very Napkins and Table clothes, and other linen that is any way soiled, which they do filthily contaminate with the excrements of their belly, and with their Viscous laying of their eggs.

In illis civilibus omnia sunt misera, Tul. Ep. femal.

Their uses.

But as they get their living by robbery, and purloining of that which others by the sweat of their brows, by their own proper wits and invention, and without the aid and help of any do take great pains for: so again they want not revenge to punish, and a provost Marshal to execute them for their wrongful dealings: teamed of some a Gray, Brock, or Badger, who in the full of the Moon maketh forcible entrance into their holes or lurking places, destroying and turning topsyturvy in a trice their whole stock, family, and lineage, with all their household stuffe and possessions.

Neither do they only minister food to this passing, profitable, and fat beast, but they serve in stead of good Almanacks to Country people, to foretell tempests and change of weather, as Hail, Rain, and Snow: for if they sit about in greater numbers, and be oftner seen about any place, then usually they are wont, it is a signe of heat and fair weather the next day. But if about twilight they are observed to enter often their nests, as though they would hide themselves, you must the next day expect rain, winde, or some stormy, troublesome or boisterous season: whereupon *Athenus* hath these verses;

*Sic & crabronum ransa agmina si volitare  
Fime sub Autumni conspexeris ethere longos  
Iam versutinos primis cum commovet ortus  
Virgilius, pelago dices inflare porcellam.*

In English thus;

*So if the buzzing troups of Hornets boaste to flie,  
In spacious air bout Autumns end you see,  
When Virgil star the evening lamp espie,  
Then from the Sea some stormy tempest sure shall be.*

Remedies  
against their  
stings.

Furthermore, since it is most certain that those remedies which do heal the stings of Wasps, do also help those wounds and griefs which Hornets by their cruel stinging cause, yet notwithstanding, as *Aggregator* hath pronounced, the *Zabor* is the *Bezoar*, or proper antidote of his own hurt, if he be oftentimes applied with Vinegar and Water, Oyl and Cow-dung tempered together. In like sort all manner of soils and earths that are miry and muddy, are much commended in this case, such as *Baccharis* applied to bald *Selenus*, who was wounded with Hornets, when longing for a little Honey, he jogged and shaken their nests, thinking he had lighted upon some Bees Honey, which *Cvid* most elegantly 3. *Psidium* hath described in these verses;

*Millia crabronum coeunt, & vertice nudo  
Spicula desigunt, orag, prima notant.  
Ille cadit praeceps, & color fitur aselli:  
Inclamat socios, auxiliumque vocat.*

In English thus;

*Of Hornets thousands on his head full bore,  
And on his face their poison'd spears stick fast,  
Then headlong down he fell, and Asse foot him smote,  
Whiles he for help his voyce to fellows cast.  
The Satyres flock came run apace, and did deride  
Their fires swollen mouth, whiles Asse had made him lame.  
The God himself did laugh, yet shewed an ear to bide  
The wound which he received, and so did heal the same.*

If any one be desirous of moe medicines against the perillous and transpiercing stinging of these horn-mad Hornets, he shall finde store of them digested together in the History of Wasps: for their remedies are common, belonging as well to the one as to the other, there being no other difference but this, that here they must be given in a greater measure or quantity, and their use ought longer to be continued. And let this suffice to have spoken thus much of such Insects or Cur-wasps longer to be continued. And let this suffice to have spoken thus much of such Insects or Cur-wasps longer to be continued. And let this suffice to have spoken thus much of such Insects or Cur-wasps longer to be continued.

### OF CANTHARIDES or Spanish Flies.

THIS kinde of Cur-wasp is called of the Grecians, *Cantharis*, and among the Latins it changeth not his name. Of the Frenchmen, *Cantharide*. Of the Italians, *Cantharella*. Of the Spaniards, *Cubillo*. Of the Germans, *Grune Kiser*, *Golakeiser*. Amongst the Belgies or Nederlanders, it is termed *Spanische Vlieghe*; and of us English men, *Cantharides*, and *Spanish Flyer*. I have seen two sorts of *Cantharides*, the one great, and the other small. Of the greater sort some are thick, and long-bodied, dyed, which are found among wheat, and these are thick, grosse, and unwieldy, like unto Beetles, they are also of sundry colours, and changeable hew, with golden streaks or lines crossing their wings, and these are best to be used in Physick. They of the other lesser kinde, are lean and thin

Serp

scrag and starvelings, broad, hairy, heavy, and sluggish, and for physical uses little worth.

The greater sort also are not always of a glittering green colour, but otherwhiles you shall have them somewhat reddish or murrey coloured, but yet all of them of a glittering brightnesse, and marvellous shining glosse, piercing the eyes with singular delight. The lesser sort are not so common as the greater, somewhat differing from them in shape and proportion of body, but in vertue, quality, and manner of breeding, there is no disagreement at all to be found.

Those of the lesser sort have their bodies and heads somewhat long and hooked, their eyes very black and hanging out, their wings growing out from the midst of their Loyns, being marked with two silver specks or pricks, and some few white spots.

They are commonly found in the Summer Season, in the herb that is called *Cicmaria*, or wilde Hemlock. Their feet and legs are very small and long, finely decked and garnished, as it were with a Vermillion red, or beautiful purple. There is also another sort of these answerable to the former, in colour of their bodies in every respect, saving that their eyes are green: their head very little; and the hinder part of their shoulders round and crooked.

The third sort have their head and shoulders all one, being so closely and confusedly joyned together, as if they were but one thing; and could not by any means be separated, unlesse in imagination, and these are of a rusty colour, and their small pink eyes as black as jet, their wings as well as their heads are nothing differing in colour, saving that their wings do glister with some streaks of the colour of gold, their feet also are short, and as black as Pitch.

The fourth is very like to the third sort, but it is rather of a greenish, then of a rusty Iron colour, but in all other respects there is no difference to be seen, saving in their magnitude, for this last described is the least of them all. But these kinds of *Cantharides* as well the greater as the lesser, do first proceed not from any beasts, as some have thought, but they rather take their Original from some rotten, stinking, and corrupt moisture and siccity, *Titidat gar en tois toon paron lein kai tau agitau, kai tou Sakels profeti toon Cantharidon phulon*, the meaning whereof is, that the whole stock and kindred of *Cantharides* do bring forth or lay their young in the vile, base, and imperfect force of heat or warmth: and further in moist Figs, as *Athenus* in his ninth Book and thirty nine Chapter, word for word hath exscribed out of *Aristotle*.

They do also breed from a certain little Worm which is found in the sponge of the Dog-bryer (called of the Physicians *Bedeguar*) and from Caterpillars of the Fig-tree, Poplar, Pear-tree, Ash, Olive-trees and Roses: for in all these there be found certain Worms, the very Founders and Parents of *Cantharides*, but yet in the white Rose these Worms are of much lesser force, power, and sufficiency, then in the former.

*Cantharides* do couple together and generate, but yet not any living creature of their own kinde, but only a little small Worm. They feed upon all manner of pulse and Corn, but especially Wheat, and then they are best for medicinal uses. The smell like unto Tar, and in their taste they much resemble the Cedar-tree, as *Nicander* reporteth. Their vertue and quality is to burn the body, to parch and to bring a hard scale or crustiness upon any part they shall be applied to, or as *Disforides* saith, to gnaw or eat into, to raise blisters, exulcerate and raise an inflammation, for which respect, they mix them with such medicaments as are appointed to heal Leprosies, any dangerous Tettters and Ring-worms, or those that be Cantrous.

They are applied to hard, Scurvy, or Mangy nails, being first tempered with some fit plaisters or Cerotum tending to the same purpose, taking them so clean away, that they fall off by the roots. Some use also to temper them with such convenient medicines as are warranted to take away Warts, Corns, or any hard-knobs or pieces of flesh growing in the hands or feet. Some again use to pulverise *Cantharides*, and then mixing them with Tar, do make an Unguent to cure the falling away of the hair, or the shedding of it, either in the head or beard, but herein there must be good advice required, lest at any time by their caustick faculty they exulcerate too deep into the flesh.

*Cantharides* mingled with Lime, serve in stead of a Pen-knife to eradicate and take away those little hard and red swellings rising chiefly in the crown of the head, at temples, or privy parts, called of some Physicians *Pani*: and some there be again that will adventure a little of them in powder, to give with such Medicines whose property is to provoke Urine: But yet there is hard hold and tough reasoning on both sides, whether they ought to be given inwardly with Diuretiques or no, considering that being so drunk, they are accounted amongst strong poisons, tormenting the bladder without any ceasing: other some again hold the contrary, assuring us upon their own experience, that not exceeding their due quantity, they may be taken with other Correctories, to serve as a Reticle to transport them to the place affected, so that you see either side hath his strength and reasons.

*Iusta pars premitur veluti cum pondere libra,  
Præna nec hac plus parte sedet, nec singit ab illa.*  
That is to say;

*As when an even scale with equal weight is placed,  
Nor falls it down this way, or is it that way raised.*











*Qua cum iustis gradibus (mirabile visu)*  
*Non aliter decessit pluit quam ex arbore nimbus.*

Which may be Englished thus;

But when no medicine can that plague expell  
 Torn up they Arts, which once the Trojans found,  
 A woman which had Virgin-laws observed well,  
 Her bare and naked bring they to the ground,  
 Flowing with Natures shameful filthy blood:  
 Her bosome open, and her hair untrimm'd falling

*Vel terebis mali, vel terebis cortice glandis,*  
*Voluitur ad terram distorto corpore campae.*

Like one ore prest with grief, forgetting good,  
 Three times about the plots and bedges walking,  
 Which done, a wonder is for to be told,  
 As rain drops from the trees, ripe Apples fall,  
 Walnuts out of husks: so cast you may bebold  
 These Worms from trees, all torn, and cannot crawl.

Theophrastus saith, that Caterpillars will touch no plants which are moistened or besprinkled with Wine. They will die if they take the fume, or be any way smoaked with the herb *Pura Actiu*. Whereby it is apparent (saith *Silvius*) that the herb commonly termed Scabious is not the true *Pura*. Caterpillars that live and feed on Coleworts, if they be but touched with that kinde of Worm which is found in the Fullers Teasel, they die. *Pliny*. All to besprinkle a Colewort whilst it hath but only three leaves, with Nitre, or with saltish and brinish earth, and by means of the saltness, the Caterpillars will be quite driven away. *Geopon*. *Palladius* in this case preferreth the ashes of Fig-leaves. The Sea-onion called *Squilla*, being sown or hanged up in Gardens, hindereth the breeding of Caterpillars. Other some in the most places of their Gardens, and round about them, sow and set Mints, the pulse called Orobus, which is somewhat like Vetches, and some Wormwood, or at least-wise hang them in bunches in divers places of the same, to expell this kinde of noysome creature.

Some very advisedly take dry leaves and stalks of Garlick, and with the same do smoke and perfume their whole Garden, so that by this way the smoke being conveyed into all places thereof, Caterpillars will fall down dead, as *Palladius* hath written, in whose writings any man may read plenty of such Antidotes and Alexipharmical medicines, as may serve to destroy Caterpillars.

Their use in  
 Physick.

Now will I speak of their use in Physick, and in the Common-weale. The web of Caterpillars being taken inwardly, stayeth womens fluxes, as *Matthiolus* saith. Being likewise burnt and put into the nostrils, it stancheth bleeding at the nose. The Caterpillars that are found amongst the herbs called Spurge of all sorts, (by the judgement of *Hippocrates*) are notable for purulent and murthery Wombs, especially if they be first dried in the Sun, with a double quantity of Earth-worms and a little Aniseed finely powdered, and so all of them to be relented, and taken in some excellent White-wine. But in case they feel any heaviness or aking in the belly after the taking of this medicine, then it were good to drink a little Mulse thereupon. This saith *Hippocrates* in his Book De *Supersatet*.

*Diocorides* in his first Book and 90. chapter, giveth in drink those common Caterpillars that live in companies together, against the disease called the Squinzie. But unless by some hid and secret property, they do good in this grief being received inwardly, it were needful (in regard of their manifest venomous nature) that they were utterly rejected and contemned. *Nicander* useth them to provoke sleep, for thus he writeth;

*Et de supe triphas oligo en hammati hamphen*  
*Krepen drisofodan epichloroida noto, &c.*

Which *Aleremias Maritus* hath thus translated;

*Quos si rodentes olus & frendentia vermes*  
*(Lucea quibus virides depingunt terga colores)*  
*In medio sacra de Palladii arbore succo*  
*Triverit, binquo tuum colleveris undiq; corpus,*  
*Tuta dabis dulci securus membra quieti.*

Which may be Englished thus;

With herb-eating, or green-leaf-gnawing Worms,  
 Whose backs imprinted are with colours lively green,  
 All bruised, mixed with juyce from *Pallas* tree that runs,  
 Anointed body brought to sound sleep is often seen.

There are to be seen in divers thorny, prickly, sharp and rough herbs, (as for example in Nettle) sundry hairy or lanuginous Caterpillars, which being tyed or hanged about some part of the body, do by and by (as the report goeth) heal those Infants which have any stopping of the meate passages when they cannot swallow.

A Caterpillar breeding in Pot-herbs, being first bruised and then anointed upon any venomous bitings of Serpents, is of great efficacy: and if you rub a naughty or a rotten tooth with the Colewort-caterpillars, and that often, within a few days following, the tooth will fall out of its own accord, *Avicenna*. Caterpillars mixt with Oyl, do drive away Serpents. *Discofideus*. If a man anoint his hands, or any other part with Oyl, it will cause that he shall receive no hurt by the stinging of Bees, Wasps, or Hornets, as *Actius* saith. *Pliny* citeth many fond and superstitious fained matters, and lying tales, devised by those who in his time were called *Magi*, Soothsayers or Diviners, concerning the admirable virtues of Caterpillars. All which, because I see them hissed out of the School of Divinity,

Divinity, and that in heart secretly I have condemned them, I will at this time let them passe without any further mention.

They are also a very good meat to divers Birds and Fowls, which are so needful for the use, benefits and food of mankind, as to Starlings, Peacocks, Hens, Thrushes, Daws or Choughes: and to sundry fishes likewise, as to the Tench, Pike or Pikerel, and to a certain Sea-fish called a Scorpion: also to the Trout, and some others, who are easily deceived with a Caterpillared hook. Which kind of fishing fraud, if you would better be instructed in, I must refer you to *Tarminius* in his *Geoponicks*, and to a little Book dedicated to *Robert Dudley*, late Earl of Leicester, written by Master *Samuel Vicer* of *Gudmanchester* in *Huntingtonshire*.

It is not to be passed over in silence, how that not many years since, there came infinite swarms of Caterpillars out of *Thracia* into *Polonia*, *Hungaria*, and beyond the limits of *Germany*, which did not only devour the fruits of trees, but whatsoever was green either in the meadows and tilled fields, besides the Vines: which was taken for an evident prognostick and sign (as many divined) of some great *Turkish* Army to come swarming into those parts: neither herein did this their ghesling and mistrust deceive them, for the next year following was the siege of *Vienna* in *Austria*, the wasting, spoiling and over-running of *Hungaria*; and the deadly English-sweating could not contain it self in an Island, but must spread it self among them of the Continent, whereupon ensued the destruction of many thousands of people, before any remedy could be found out. In the year of grace 1573, there rushed infinite swarms of Caterpillars into *Italy*, where they spoiled and made havock of all green buds and grasse growing upon the face of the earth, so that with their unquenchable and insatiate voracity, they left nothing but the bare roots of trees and plants: and this hapned chiefly about *Mantua* and *Brixia*. And upon the neck of this, followed a terrible and fearful pestilence, of which there dyed about 50. thousand persons.

Also in the year of our Lord GOD 1570. there were two great and sudden swarms of Caterpillars that came rushing into *Italy* in the space of one Summer, which put the *Romans* into an exceeding great fear, for there was nothing left green in all their fields that could be preserved from their ravine, and from their gluttonous and pilling maw. And although the fertility of the year immediately following, did almost blot and rase out the memory of this their heavy punishment, and that many seemed as it were to repent them of their repentance; yet are we not to doubt, but that many were truly penitent, and seriously were drawn to amendment of life by a due consideration hereof. God grant that we may be warned by other mens punishments, lest that poor creature, which we imagine to be the filliest and least able to do us harm, we finde the most heavy.

### Of the BOAS.

It was well known among all the *Romans*, that when *Regulus* was Governor or General in the *Panick* wars, there was a Serpent (neer the River *Bagrade*) killed with slings and stones, even as Town or little City is overcome, which Serpent was an hundred and twenty foot in length: whose skin and cheek bones were reserved in a Temple at *Rome*, until the *Mumantine* war.

And this History is more easie to be believed because of the Boas Serpent bred in *Italy* at this day: for we read in *Solinus*, that when *Claudius* was Emperor, there was one of them slain in the *Vatican* at *Rome*, in whose belly was found an Infant swallowed whole, and not a bone thereof broken. The *German* call this Serpent *Unke*, and besides them I do not read of any other Name. Some have ignorantly confounded it with *Chersidrum*, an Adder of the earth, but upon what reason I do not know, only *Solinus* discoursing of *Calabria*, might give some colour to this opinion, when he saith, *Calabria* *Chersidrum* & frequentissime, & Boas gignit quem Anguem ad immensam molem ferum coalescere: that is to say, *Calabria* is full of Earth-adders, and it breedeth the Boas, which Snake some affirm will grow into a monstrous stature. Out of which words, there is no wise man can collect, that the Boas and the Adder of the earth are all one thing.

The *Latins* call it *Boa* and *Bova* of *Boi*, because by sucking Cows milk it so encreaseth, that in the end it destroyeth all manner of herds, Cattel and Regions. And our domestical Snakes and Adders, will also suck milk from Kine, as in all the Nations of the world is most manifest to them that will observe the same.

The *Italians* do usually call them, *Serpente de Aqua*, a Serpent of the water, and therefore all the Learned expound the *Greek* word *Hydra* for a Boas. *Cardan* saith, that there are of this kinde in the Kingdom of *Senega*, both without feet and wings, but most properly they are now found in *Italy*, according to these verses;

*Boa quidem Serpens quem tellus Italia nutrit*  
*Hunc bubulum plures lac emittit decens.*

Which may be Englished thus;

The Boas Serpent which *Italy* doth breed,  
 Men say, upon the Milk of Cows doth feed.

Their fashion is in seeking for their prey among the herds, to destroy nothing that giveth suck so long as it will live, but they reserve it alive until the milk be dried up, then afterward they kill and eat











There are certain learned Writers in *Saxony*, which affirm, that there are many kinds of Serpents in their Woods; whereof one is not unlike to a Cockatrice: for they say it hath a very sharp head, a yellow colour, in length not exceeding three Palms, of a great thickneſſe, his belly spotted with a yellow colour, in length not exceeding three Palms, of a great thickneſſe, his belly spotted and adorned with many white prickles: the back blew, and the tail crooked and turned up: but the opening of his mouth is far wider than the proportion of his body may ſeem to bear. Theſe Serpents may be referred to Cockatrices: for howſoever their poiſon is not ſo great as the Baſilisks of *Africa*, (even as all other Serpents of the hot Countries are far more peſtiferous than thoſe which are bred in the cold Countries:) the very lame reaſon perſwadeth me, that there is a difference among the Cockatrices, and that thoſe of *Saxonia* may differ in poiſon from thoſe in *Africa*, and yet be true Cockatrices: Beſides this, there is another reaſon in *Lemnius*, which perſwadeth that there are no Cockatrices; becauſe when the Countrymen ſet upon them to kill them with Clubs, Bills, or Forks, they receive no hurt at all by them, neither is their any apparent cagion of the air: but this is answered already, that the poiſon in the cold Country is nothing ſo great as in the hot; and therefore in *Saxony* they need fear the biting, and not the air infection.

*Carduus* relateth another story of a certain Serpent, which was found in the walls of an old decayed House in *Millan*, the head of (saith he) was as big as an Egge, too big for the body, which in quantity and shape resembled a Steellion. There were teeth on either chap, such as are in *Vipers*. It had two legs, and those very short, but great, and their feet had claws like a Cat: so that when it stood it was like a Cock, for it had a bunch on the top of the head, and yet it moved both with feathers and wings: The tail was as long as the body, in the top thereof there was a round bunch as big as the head of an *Italian* Steellion. It is very likely that this beaſt is of the kinde of Cockatrice.

Now we are intrest of the poyson of this Serpent, for it is a hot and venomous poyson, infecting the air round about, so as no other creature can live near him; for it killeth, both immediately by hissing and by his fight, (as is said of the Gorgons), but also by his touching, both indirectly and mediately; that is to say, not only when a man toucheth the body it self, but also by touching a Weapon wherewith the body was slain, or any other dead beast slain by it; and there is a common fame, that a Horse-man taking a Spear in his hand, which had been thrust through a Cockatrice, did not only draw the poyson of it into his own body and so dyed, but also killed his Horse thereby.

Lycorn wryeth;

*Quid prodest miseri Basiliscus cuspide Mauri  
Transactus? velox currit pertela venenum,  
Invadit manum equumque.* )

**In English thus:**

*What bad the Moore to kill  
The Cockatrice with Spear,  
Sith the swift poyson him did spill,  
And Horse that did him bear.*

**Pongettius.**

The question is in what part of this Serpent the poyson doth lie; some say in the head alone, and that therefore the Basilisk is deaf, because the Air which serveth the Organ of hearing, is relaxed by the intensive calidity: but this seemeth not to be true, that the poyson should be in the head only, because it killeth by the fume of the whole body, and besides when it is dead it killeth by only touching it, and the Man or Beast to slay, doth also by touching kill another: Some again say, that the poyson is in the breast, and that therefore it breatheth at the sides, and at many other places of the body, through and betwixt the scales; which is also true, that it doth so breathe: for otherwise the burning fume that proceedeth from this poysonful beast, would burn up the Entrails thereof: if it came out of the ordinary place; and therefore Almighty GOD hath so ordained, that it should have Spiraments and breathing places in every part of the body, to vent away the heat, lest that in very short time, by the inclusion thereof, the whole compage and juncture of the body should be utterly dissolved, and separated one part from another.

But to omit inquiry in what part of his body the poyson lyeth, seeing it is most manifest that it is universal, we will leave the feat thereof, and dispute of the instruments and effects.

universal, we will leave the part thereof, and dispute of the instruments and effects. By his own kinde; First of all therefore it killeth his own kinde, by sight, hearing, and touching. By his own kinde; I mean other Serpents, and not other Cockatrices, for they can live one beside another, for it is true (which I do not believe) that the *Arabian Harmene* were any other Serpent then a Cockatrice, the very same reason that *Aradynus* giveth of the fellowship of these two Serpents together, (because of the similitude of their natures) may very well prove that no divers kinde can live in well together, in safety without harming one another, as do one and the same kinde together. And therefore there is more agreement in nature betwixt a Cockatrice and a Cockatrice, then a Cockatrice and *Harmene*, and it is more likely that a Cockatrice doth not kill a Cockatrice, then a Cockatrice doth not kill an *Harmene*: And again, Cockatrices are engendered by Eggs, according to the holy Scripture; and therefore one of them killeth not another by touching, kissing, or feeding, because one of them hatcheth another. But it is a question whether the Cockatrices dye by the sight of himself: some have affirmed so much, but I dare not subscribe; thereunto, because the reason

reason it is impossible that any thing should hurt it self, that hurteth not another of his own kinde, yet if in the secret of nature GOD have ordained such a thing, I will not strive against them that can shew it.

Among all living creatures, there is none that perisheth sooner then doth a man by the poyson of a Cockatrice, for with his sight he killeth him, because the beams of the Cockatrices eyes, do corrupt the visible spirit of a man, which visible spirit corrupted, all the other spirits coming from the brain and life of the heart, are thereby corrupted, and so the man dyeth: even as women in their monthly courses do viciate their looking-glasse; or as a Wolf suddenly meeting a Man, taketh from him his voyce, or at the least-wile maketh him hoarse.

To conclude, this poyson infecteth the air, and the air so infected killeth all living things, and likewise all green things, fruits, and plants of the earth : it burneth up the grasse whereupon it groweth or creepeth, and the fowls of the air fall down dead when they come near his den or lodging. Sometimes he biteth a Man or a Beast, and by that wound the blood turneth into choler, and so the whole body becometh yellow as gold, presently killing all that touch it, or come near it. The symptoms are thus described by *Nicander*, with whose words I will conclude this History of the Cockatrice, writing as followeth :

Quod ferit hic, multo corporis succenditur igne,  
A membris resoluta subit caro defluit, & fit  
Lurida & obscuro nigrescit opaca colore.  
Nulla etiam volucres quæ fœda cadavera pascunt,  
Sic occisum hominem tangunt, ut vultur, & omnes :  
Huius similes alia, pluviae quoque minutæ autæ

Which may be Englished thus:

When he doth strike, the body hurt is set on fire,  
And from the members falls off the flesh, wit ball,  
It rottens, and in the colour black as any mire.  
Refus'd of carrion-feeding birds both great and small  
Are all men so destroy'd. No Vulture or Biter fierce,  
Or Weather telling-crow, or Deserts wildest beast.

Corvus, nec quæcumq; fera per devia lustrâ  
Degunt, è tali capimur sibi tabula carne.  
Tum teret vacuas odor hinc exhalat in aurâ,  
Atque propinquantes penetrant non segner artus:  
Sin cogente fame veniens approximet ales,  
Tristitia fata referi, certamq; ex aëre mortem.

Which live in dens sustaining greatest famines fore;  
But at their tables do this flesh detest.  
Then in the air repeat with's loathsome smell,  
Piercing vital parts of them approaching neer,  
And if a bird is taft to fill his hunger fell,  
It dies affured death, none need it fear.

of the CORDIL.

Although I finde some difference about the nature of this living creature, and namely whether it be a Serpent or a Fish, yet because the greater and better part make it a Serpent, I will also bring it in this due order in this place for a venomous Beast. Gesner is of opinion, that it is no other but a Lizard of the Water; but this cannot agree with the description of *Aristotle* and *Belonius*, who affirm the Cordil to have Gills like a Fish, and these are not found in any Lizard. The Grecians call this Serpent *Kordile*, and *Kordulio*, whereof the Latiner derive or rather borrow their *Cordulus*, and *Cordyla*. *Nomenclatur* maketh this a kinde of Salamander which the Apothecaries do in many Countries likewise sell for the *Scincus* or Crocodile of the earth, and yet it exceedeth the quantity of a Salamander, being much lesse then the Crocodile of the earth, having gills, and wanting fins on the sides, also a long tail, and according to the proportion of the body, like a Squirrel, although nothing so big, without scales: the back being bald and somewhat black, and horrible rough, through some bunches growing thereupon, which being pressed do yeeld a certain humor like milk, which being laid to the Nothbrist doth smell payson, even as it is in a Salamander. The beak or snout is very blunt or dull, yet armed with very sharp teeth. The claws of his fore-legs are divided into four, and on his hinder-legs into five: there is also a certain fleshy fin growing all along from the crown of his head, unto his tail upon the back, which when he swimmeth he erecteth, and by it is his body sustained in the water from sinking, for his body is moved with crooked winding, even as an Eel or a Lamprey.

The inward parts of this Serpent are also thus described. The tongue is soft and spongy, like as is the tongue of a Water-frog, wherewith as it were with glew, he draweth to his mouth, both Leeches and Worms of the earth, wherupon it feedeth. At the roote of his tongue there is a certain bunch of flesh, which as I think supplyeth the place of lights, for when it breatheath, that part is especially moved, and it paneth to and fro, so that thereby I gather, either it hath the lights in that place, or else in some other place near the jaws. It wanteth ribs as doth the Salamander, and it hath certain bones in the back, but not like the ordinary back-bone of other such Serpents. The heart is also all spongy, and cleaveth to the right side, not to the left: the left ear whereof supplyeth the place of the Pericardium.

**The**



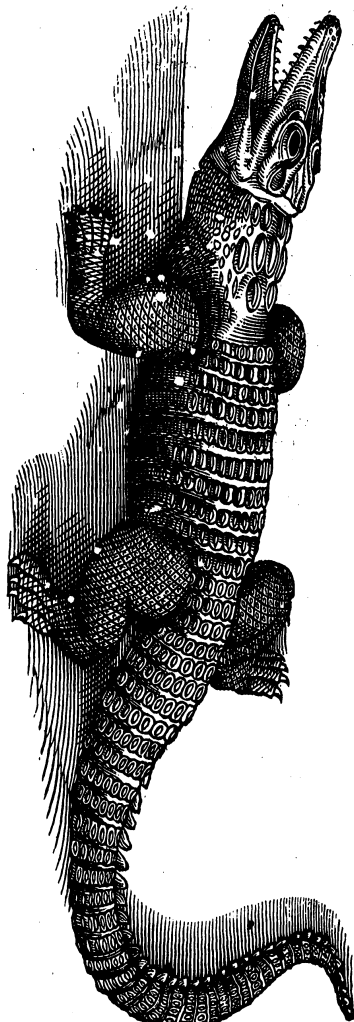
The liver is very black, and somewhat cloven at the bending or floop side: the milts somewhat red, cleaving to the very bottom of the ventricle. The reins are also very spongy, joynted almost to the legs, in which parts it is most fleshy, but in other places, especially in the belly and breast, it is all skin and bone. It also beareth eggs in her place of conception, which is forked on double, which all skin and bone. It also beareth eggs in her place of conception. Those Eggs are nourished with a are there disposed in order, as in other living gristly creatures. Those Eggs are nourished with a kinde of red fat, out of which in due time come the young ones alive, in as great plenty and number as the Salamanders. And these things are reported by *Bellonius*, besides whom I finde nothing more said, that is worthy to be related of this Serpent, and therefore I will here conclude the History whereof.

### of the CROCODILE.

BECAUSE there be many kindes of Crocodiles, it is no marvel although some have taken the word *Crocodilus* for the *Genus*, and the several *Species*, they distinguish into the Crocodile of the earth and the water. Of the earth are sub-divided into the Crocodiles of *Brescia*, and the *Scinsum*: the Crocodiles of the water into this here described, which is the vulgar one, and that of *Nilus*; of all which we shall treat in order, one successively following another. But I will not contend about the *Genus* or *Species* of this word, for my purpose is to open their several natures, so far as I have learned, wherein the works of Almighty God may be known, and will leave the strife of words to them that spend their wits about terms and syllables only. Thus much I finde, that the Ancients had three general terms for all egge-breeding Serpents. Namely, *Rane*, *Tesudo*, *Lacerta*: And therefore I may forbear to entreat of Crocodiles as a *Genus*, and handle it as a *Species*, or particular kinde. The *Hebrews* have many words which they use for a Crocodile. *Koah*, *Levit. 11.* which the *Arabians* render *Hardan*; and the *Persians*, *Sange*, which word cometh near the *Latine* word *Scinsum* for a Crocodile of the earth, and yet that word *Koah* by *Saint Jerom*, and the *Septuaginta* is translated a Chameleon.

In the same place of *Leviticus* the word *Zab* is interpreted a kinde of Crocodile wherewithall *David Kimhi* confoundeth *Grekhim*, and *Rabbi Solomon*, *Faget*. The *Chaldees* translate it *Zaba*; the *Persians*, *An Raju*; the *Septuaginta*, a Crocodile of the earth; but it is better to follow *Saint Hieron* in the same, because the Text addeth according to his kinde, wherefore it is superfluous to adde the distinction of the Crocodile of the earth, except it were lawful to eat the Crocodiles of the water.

In *Exod. 8.* there is a fish called *Zophar*, which cometh out of the waters and eateth men, this cannot agree to any fish in *Nilus*, save only the Crocodile; and therefore this word is by the *Arabians* rendered *Al Timejst*. Some do here



by understand *Pagulus*, *Gnathia*, and *Burastis*; that a great *Prug*, *Alia* by the most of the *Indians* understand a *Horbeach*, *Boo*, *30*; but *David Kimhi* taketh and useth it for a *Crocodile*. For he saith, it is a great Worm, sliding near the Rivers sides, and upon a sudden leaping upon men of cattle as they passe beside him. *Tijma* and *Alina* are by *Avien* expounded for a *Crocodile*; and *Tijma* for that the Crocodile that never moveth his neither of under chap.

*Srah* saith, who in the Province of *Assuan* in *Egypt*, there is a holy Crocodile worshipped by the Inhabitants, and kept tame by the Priests in a certain Lake; this sacred Crocodile is called *Sueba*, and this word cometh near to *Sander*, which as we have said, signifies any Crocodile of the earth, from which the *Arabian* *Tijma* seemeth also to be derived, as the *Egyptian* *Tijma* doth come next to the *Arabian* *Tijma*. *Horodius* calleth them *Champh*, and this was the old *Indian* word for a *Viper*. Crocodile in *Indog*. Upon occasion whereof *Suliger* saith, he asked a *Turk* by what name they call a Crocodile at this day in *Turky*, and he answered *Kamfar*, which is most evidently corrupted from *Champh*.

The *Egyptians* vulgarly call the Crocodile of *Nilus*, *Chemis*, the *Grecians*, *Chelonia*, *Chelone*, generally *Krocodilos*, and sometimes *Dendrois*. The *Latins*, *Crocodili*; and *Alberus*, *Crocodili*, and the same word is retained in all languages of *Europe*. About the Etymology of this word, I finde two opinions not unprofitable to be rehearsed: the first, that *Crocodili* cometh of *Croco*, *Saffron*, because this Beast, especially the Crocodile of the earth, is afraid of *Saffron*, and therefore this Country people, to defend their Hives of Bees and Honey from them, throw upon the places of nature. But this is too far fetched, to name a Beast from that which it feareth, and being a secret in nature, it is not likely that it was discovered at the first, and therefore the name must have some other investigation.

*Hyponus* saith, that the name *Crocodili* cometh of *Croco*, *color*, the colour of *Saffron*, because such is the colour of the Crocodile; and this seemeth to be more reasonable. For I have seen a Crocodile in *England* brought out of *Egypt* dead, and killed with a *Musket*, the colour whereof was like to *Saffron* growing upon stalks in fields. Yet it is more likely, that the derivation of *Valinus* and *Hyponus* is the original, for they say that the Moors of lands on the Rivers, were called *Croco* and *Croco*; and because the Crocodiles haunt and live in those shores, it might give the name to the Beasts, because the water Crocodiles live and delight in those lands; but the land or earth Crocodiles above, and fear them.

It is reported that the famous *Grammatian* *Artemidorus* seeing a Crocodile lying upon the lands, he was so much touched and moved therewith, that he fell into an opinion that his left leg and hand were eaten off by that Serpent, and that thereby he lost the remembrance of all his great learning and knowledge of *Ares*. And thus much for the name of this Serpent.

In the next place we are to consider the Countries wherein Crocodiles are bred, and keep their habitation, and those are especially *Egypt*, for that only hath Crocodiles of both kinds, that is, the water and of the land, for the Crocodiles of *Nilus* are *Amphibii*, and live in both elements; they are not only in the River *Nilus*, but also in all the pools next adjoining. The River *Namafis* next to *Alia* in *Africa*, doth also bring forth Crocodiles: and *Pliny* saith, that in *Dana*, a River of *Mauretaniam*, there are Crocodiles engendered. Likewise *Apollonius* reporteth, that when he passed by the River *Indus*, he met with many Sea-horses and Crocodiles, such as are found in the River *Nilus*, and besides these Countries I do not remember any other, wherein are engendered Crocodiles of the water, which are the greatest and most famous Crocodiles of all other.

The Crocodiles of the earth, which are of lesser note and quantity, are more plentiful, for they are found in *Lycia*, and in *Bythinia*, where they are called *Azathia*; and in the Mountain *Seyrus* in *Arabia*, and in the Woods of *India*, as is well observed by *Alimur*, *Dioscorides*, and *Herodotus*, and therefore I will not prosecute this matter any further.

The kinds being already declared, it follows that we should proceed to their quantity and several parts. And it appeareth that the water Crocodile is much greater, and more noble than the land Crocodiles of the earth; for they are not now above two cubits long, or sometimes half the more, but the other are fifteen, and sometimes more. And besides these Crocodiles, it may be said, that in the water (saith *Belahensis*) then their young ones are much greater, but on the land, then they are lesser, and likewise Crocodiles of the earth. In the River *Ganges* there are two kinds of Crocodiles, one of them is harmless, and doth no hurt to any creature, but the other is devouring unfeeling Beast, killing all that he meeteth by mouth, without all mercy. The former is of quality, in the top of whose snout there groweth a bunch like a horn.

Now a Crocodile is like a Lizard in all points (excepting the tail, and the quantity of a Lizard) yet it liveth an Egge no greater than a Goose Egge, and fructs so small a beginning with this monstrous Serpent, growing all his life long, unto the length of fifteen or twenty cubits. And as *Pliny* saith, in the days of *Ptolemy*, King of *Egypt*, there was one found of seven and twenty cubits long; and before that, in the days of *Alexander*, one that was above six and twenty cubits long, the reason whereof was their long life, and continual growth.

We have shewed already, that the colour of a Crocodile is like to *Saffron*, that is, between yellow and red, more inclining to yellow than red, not unlike to the blacker kind of *Chameleon*, as *Pliny* saith; that their belly is somewhat whiter than the other parts. Their body is rough, being covered with a certain bark or rinde, so thick, firm, and strong, as it will not yield (and especially about the back) unto a cart-wheele when the cart is loaded, and in all the parts,

parts, and the tail, it is impenetrable with any dart or spear, yea scarcely to a pistol or small gun, but the belly is softer, whereon he receiveth wounds with more facility: for as we shall shew a few words, there is a kind of Dolphin which cometh into *Nilus*, and fighteth with them, wounding them on the belly parts.

The covering of their back is distinguished into divers divided shells, standing up far above the skin, and towards the sides they are less eminent, but on the belly they are more smooth, white, and very penetrable. The eyes of a Crocodile of the water, are reported to be like unto a Swine's, and therefore in the water they see very dimly, but out of the water they are sharp and quick sighted, like to all other four-footed Serpents that lay eggs. They have but one eyelid, and that groweth from the neather part of the cheek, which by reason of their eyes never twinkleth. And the *Egyptians* say, that only the Crocodile among all the living creatures in the water, draweth a certain thin bright skin from his fore-head over his eyes, wherewithall he covereth his sight: and this I take to be the only cause of his dim sight in the waters.

The head of this Beast is very broad, and his snout like a Swine's. When he eateth or biteth, he never moveth his neather or under-chap, whereof *Aristotle* giveth this reason, that seeing Nature hath given him so short feet, as that they are not able to hold or to take the prey, therefore the mouth is fastened in stead of feet, so as it may more vehemently strike and wound, and also more speedily move and turn after the prey, and this is better done by the upper, then the neather-chap. But it is likely that he was deceived, for he is said to have a Crocodile of the Sea, whereas there is no Crocodile of the Sea, but rather some other monster, like a Crocodile in the Sea, and such perendurle, *Albertus* say, and thereupon ignorantly affirmed, that all Crocodiles move their under-chap, except the *Tuchas*. But the learned *Vesalius* proveth it to be otherwise, because that the neather-chap is so conjoynd and fastened to the bones of the temples, that it is not possible for it to be moved. And therefore the Crocodile only amongst all other living creatures, moveth the upper-chap, and holdeth the under-chap unmoveable.

The second wonder unto this, is that the Crocodile hath no tongue, nor so much as any appearance of a tongue. But then the question is, how it cometh to distinguish the savours and tail of his meat. Whereunto *Aristotle* answereth, that this Crocodile is such a ravening Beast, that his meat carryeth not in his mouth, but is carryed into his stomach, like as other water Beasts, and therefore they discern savours, and relish their meat more speedily then other; for the water or humor falleth so fast into their mouths, that they cannot stand long upon the taste or distast of their meat. But yet some make question of this, and they answer that most men are deceived herein, for whilst they look for his tongue upon his neather-chap, as it is in all other Beasts, and finde none, they conclude him to want that part: but they should consider, that the tongue cleaveth to the movable part, and as in other Beasts the neather-chap is the seat of the tongue, because of the motion, so in this the tongue cleaveth to the upper-chap, because that it is moveable, and yet not visible as in other.

And therefore is very hardly discerned. For all this, I rather conclude with the former Authors, that seeing it liveth both in the waters and on the land, and therefore it resembleth a fish and a beast, as it resembleth a Beast, *locum habens lingue*, it hath a place for a tongue; but as it resembleth a fish, *linguam non habet*, it is without a tongue. It hath great teeth standing out; all of them stand out before liveth when the mouth is shut, and fewer behinde. And whereas *Aristotle* writeth, that there is no living creature which hath both *dentes prominentes*, & *retractos*, that is, standing out, and divided inwards, yet the Crocodile hath both. Their teeth are white, long, sharp, and a little crooked and hollow, their quantity well resembling the residue of the proportion of the body: and some say that a Crocodile hath three rows of teeth, like the Lyon of *Chinus*, and like the Whale, but this is not an approved opinion, because they have no more then sixty teeth. They have also long joyned bones in the back, which are also tyed together with so many nerves. The opening of his mouth reacheth to the place of his ears, and there be some Crocodiles in *Ganges* which have a kind of little horn upon their noses or snout. The milt is very small, and this some say is only in them which bring forth eggs, their stones are inward and cleave to their loyns. The tail is of the same length that the whole body hath, and the same is also rough and armed with hard skin upon the upper part and the sides, but beneath it is smooth and tender. It hath fins upon the tail, by the benefit whereof it swimmeth, as also by the help of the feet. The feet are like a Bear, except that they are covered with scales in stead of hair; their nails are very sharp and strong, for if it had a thumb as well as it hath feet, the strength thereof would over-turn a ship. It is doubtful whether it hath any place of excrement except the mouth. And thus much for the several parts of the Crocodile.

The knowledge also of the natural actions and inclinations of Crocodiles is requisite to be handled in the next place, because that actions follow the members as sounds do instruments. First therefore, although *Aristotle* for the most part speaking of a Crocodile, calleth it *aquaticus* & *fluviatilis*, yet it is not to confine it to the Waters and Rivers, as though it never came out of them like fishes, but only to note that particular kind which differeth from them of the earth, for it is certain that it liveth in both elements, namely earth and water: and for the time that it abideth in the water, it also taketh air, and not the humor or moistness of the water, yet can they not want either humor of the water or respiration of the air, and for the day time it abideth on the land, and in the night in the water, because in the day the earth is hotter then the water, and in the night the water warmer then the earth: and while it liveth on the land, it is so delighted with the Sun,

shine, and lyeth therein so immoveable, that a man would take it to be stark dead. The eyes of a Crocodile (as we have said) are dull and blinde in the water, yet they appear bright to others, for this cause, when the *Egyptians* will signifie the Sun-rising, they picture a Crocodile looking upward to the earth, and when they will signifie the West, they picture a Crocodile looking upward to the moit part the Crocodile lyeth upon the banks, that he may either dive into the water with speed, or ascend to the earth to take his prey.

By reason of the shortness of his feet, his pace is very slow, and therefore it is not only easie to escape from him by sight, but also if a man do but turn aside and winde out of the direct way, his body is so unable to bend it self, that he can neither winde nor turn after it. When they go under Seilions, and Tortoises, they have all their legs joyned to their sides, which are so retorted as they may bend to either side; for the necessity of covering their eggs; but when they are abroad, and go bearing up all their bodies, then they bend only outward, making their thighs more visible. It is somewhat questionable, whether they lye hid within their caves four months or sixty days, from the condition of the cold weather, for which cause they lye hid in the Winter time. Now lie but four months, but if it be by accident of cold weather prolonged longer, then for the same cause the Crocodile is longer time in the earth. During the time they lie hid, they eat nothing, but sleep (as it is thought) immoveably, and when they come out again, they do not cast their skins as other Serpents do.

The tail of a Crocodile is his strongest part, and they never kill any beast or man, but first of all they strike him down and astonish him with their tails, and for this cause, the *Egyptians* by a Crother way, or neer the banks of *Nilus*, wherein they abide, taking sometimes a calf from the Cow in his Dam, and carrying it whole into the waters. And it appeareth by the pourtraiture of *Neuter*, by a kind of natural instinct, do not drink but as they run, for fear of the Crocodiles: where-by *Nilus*.

When they desire fishes, they put their heads out of the water as it were to sleep, and then suddenly when they espy a booty, they leap into the waters upon them and take them. After that they have eaten and are satisfied, then they turn to the land again; and as they lie gazing upon the earth, the little bird *Trochilus* maketh clean their teeth, and is satisfied by the remainders of the flesh sticking upon them. It is also affirmed by *Arnoldus*, that it is fed with mud, but the holy Crocodile in the *Strabo*. Provoked of *Arsinoe*, is fed with bread, flesh, wine sweet and hard, sod flesh and cakes, and such like things as the poor people bring unto it when they come to see it. When the *Egyptians* will write a *Orn*, man eating or at dinner, they paint a Crocodile gaping.

They are exceeding fruitful and prolificall, and therefore also in Hieroglyphicks they are made to signifie fruitfulness. They bring forth every year, and lay their eggs in the earth or dry land. For during the space of thescore days they lay every day an Egge, and in the like space they are hatched into young ones, by sitting or lying upon them by course, the male one while, and the female another. The time of their hatching is in a moderate and temperate time, otherwise they perish and come to nothing, for extremity of heat spoyleth the egge, as the buds of some trees are burned and scorched off by the like occasion. The egge is not much greater then the egge of a Goose, and the young one out of the shell is of the same proportion. And so from such a small beginning doth this huge and monstrous Serpent grow to his great stature, the reason whereof, (saith *Aristotle*) is, because it groweth all his life long even to the length of ten or moe cubits. When it hath laid the eggs, it carryeth them to the place where it shall be hatched, for by a natural providence and foresight; it avoideth the waters of *Nilus*, and therefore ever layeth her eggs beyond the compass of her floods: by observation whereof, the people of *Egypt* know every year the inundation of *Nilus* before it happen. And in the measure of this place it is apparent, that this Beast is not induced only with a Spirit of reason, but also with a fatidical or propheticall geographical delination, for so the placeth her eggs in the brim or bank of the flood (before the flood cometh) that the water may cover the nest, but not her self that sitteth upon the eggs. And the like to this is the building of the Beaver, as we have shewed in due place before in the History of four-footed Beasts.

So soon as the young ones are hatched, they instantly fall into the depth of the water, but if they meet with Frog, Snail, or any other such thing fit for their meat, they do presently tear it in pieces, the dam biteth it with her mouth, as it were punishing the pusillanimity thereof, but if it hath greater things, and be greedy, ravening, indolent and bloody; that she maketh much of, and who love their children in judgement, fore-seeing their indolent inclination, and not in affection, without regard of worth, vertue, or merit. It is said by *Philo*, that after the egge is laid by the Crocodile, many times there is a cruel stinging Scorpion which cometh out thereof, and woundeth the Crocodile that laid it. To conclude, they never prosper but neer the waters, and they live three score *S. Inna* years, or the age of a mans life.

Calius Rho.

Herodotus.  
Pliny.  
Solinus.  
Marcellinus.Albertus.  
Herodotus.

Aristotle.

P. Martyr.

Elamius.

Herodotus.  
Pliny.

Orn.

Elamius.  
Solinus.

Phalarch.



Herodotus.

This Crocodile of *Mary*, is the same that is called *Asinus* and like to that at *Thebes*, about which they did hang jewels of gold, silver, and jems of ear-rings, bracelets, and such other things of price. When it dyed, they did season the body thereof with salt, and buried it in the holy Tombs or burying Pots. The same also are called *Ombite*, I mean the people of that *Egypt* which dwell in *Asinus*, and for the love of the Crocodiles, they abandon all manner of Hawks their enemies, inasmuch that many times they take them and hang them up in publique upon gallows for that much that many times they take them and hang them up in publique upon gallows for that purpose erected. And further, they keep certain days of triumphs like the *Olympiads*, and games of honour; and so far they were blinded with that superstition, that they thought themselves exceedingly blessed if they lost their children by them, and thought themselves much honoured, if they saw them with their eyes scorched out of the streets and playing places by Crocodiles.

Again, all the *Egyptians* hold opinion, that the Crocodile is a Divinator, which they prove by the testimony of *Priestment*, who calling one of the sacred Crocodiles, which was the oldest and best of all, he would not answer him, and afterward offering him meat, he also refused it, whereas many wondered: and some of the Priests said, it was some prognostical sign either of the Kings death or his own, and so it fell out shortly after, for the same Crocodile dyed. As though a Swine might not as well be accounted divine, seeing it also refuseth all meat and provocation at the time of their sickness, and before death.

There is a City in *Egypt* called *Apollinopolis*, the City of *Apollo*, where the Inhabitants abhor and condemn the worship of Crocodiles, for when they take any of them they hang them up and beat them to death, notwithstanding their tears and cryings, and afterwards they eat them: but the reason of their hatred is, because *Typhon* their ancient enemy, was clothed with a Crocodiles shape. Others also say, the reason of their hatred is, because a Crocodile took away and devoured the daughter of *Panetes*, and therefore they enjoyed all their posterity to hate Crocodiles.

Orin.

Z. lian.

To conclude this discourse of Crocodiles inclination, even the *Egyptians* themselves account a Crocodile a savage and cruel murdering Beast, as may appear by their Hieroglyphicks, for when they will deciphere a mad man, they picture a Crocodile, who being put from his desired prey by forcible resistance, he presently rageth against himself. And they are often taught by lamentable experience, what fraud and malice to mankind liveth in these Beasts, for they cover themselves under willows and green hollow banks, till some people come to the Waters side to draw and fetch water, and then suddenly, or ever they be aware, they are taken and drawn into the water. And also for this purpose, because he knoweth that he is not able to overtake a man in his course or chase, he taketh a great deal of water in his mouth, and casteth it in the path-way, so that when they endeavour to run from the Crocodile, they fall down in the slippery path, and are overtaken and destroyed by him. The common proverb also, *Crocodili lachrymæ*, the Crocodiles weep, justifieth the treacherous nature of this Beast, for there are not many brute Beasts that can weep, but such is the nature of the Crocodile, that to get a man within his danger, he will sob, sigh, and weep, as though he were in extremity, but suddenly he destroyeth him. Others say, that the Crocodile weepeth after he hath devoured a man. Howsoever it be, it noteth the wretched nature of hypocritical hearts, which before-hand will with feigned tears endeavour to do mischief, or else after they have done it be outwardly sorry, as *Judas* was for the betraying of Christ, before he went and hanged himself.

The males of this kinde do love their females above all measure, yea even to jealousy, as may appear by this one History of *P. Marius*. About the time that he was in those countries, there were certain Mariners which saw two Crocodiles together in carnal copulation upon the sands next the River, from which the water was lately fallen into a certain Island of *Nilus*, the greedy Mariners forsook their ship, and betook themselves to a long boat, and with great shouting, hollowing and crying, made towards them in very courageous manner: the male at the first assault fell amazed, and greatly terrified ran away as fast as he could into the waters, leaving his female lying upon her back, (for when they ingender, the male turneth her upon her back, for by reason of the shortness of her legs he cannot do it her self.) So the Mariners finding her upon her back and not able to turn over her self, they easily slew her, and took her away with them. Soon after the male returned to the place to seek his female, but not finding her, and perceiving blood upon the sand, conjectured truly that she was slain, wherefore he presently cast himself into the River of *Nilus* again, and in his rage swam stoutly against the stream until he overtook the ship, wherein his dead female was, which he presently leapt upon, liking up himself and catching hold on the sides; would certainly have entered the same, had not the Mariners with all their force battered his head and hands with clubs and flaves, until he was weary and forced to give over his enterprise; and so with great fighting and sobbing departed from them. By which relation it is most clear what natural affection they bear one to another, and how they choose out their fellows, so it were fit wives and husbands for procreation.

And it is no wonder if they make much of one another, for besides themselves they have few friends in the world, except the Bird *Trochilus* and Swine, of whom I can say little, except that they followeth. As for the little Bird *Trochilus*, it affecteth and followeth them for the benefit of his own belly; for while the Crocodile greedily eateth, there sticketh fast in his teeth some part of his prey, which troubleth him very much, and many times ingendereth Worms, then the Beast to help himself taketh land, and lyeth gaping against the Sun-beams westward, the Bird perceiving it,

lyeth to the jaws of the Beast, and there first with a kinde of tickling-scratching, procureth (as it were) licence of the Crocodile to pull forth the Worms, and so eateth them all out, and cleneth the teeth thoroughly, for which cause the Beast is content to permit the Bird to go into his mouth. But when all is cleneth, the ingrateful Crocodile endeavoureth suddenly to shut his chaps together upon the Bird, and to devour his friend, like a curled wretch which maketh no reckoning of friendship, but the turn served, requiteth good with evil. But Nature hath armed this little Bird with sharp thorns upon her head, so that while the Crocodile endeavoureth to shut his chaps and close his mouth upon it, those sharp thorns prick him into his palate, so that full sore against his unkinde nature, he letteth her flye safe away. But whereas there be many kinds of *Trochilus*, which are greedy of these Worms or clenings of the Crocodiles, some of them which have not thorns on their heads pay for it, for there being not offence to let the closing of the Crocodiles mouth, they must needs be devoured: and therefore this enforced amity betwixt him and the Crocodile, is only to be understood of the *Cledoromychus*, as it is called by *Hermolam*.

There be some that affirm, that he destroyeth all without exception that thus come into his mouth, and other some say he destroyeth none, but when he feeleth his mouth sufficiently cleneth, he waggeth his upper chap, as it were to give warning of avoidance, and in favour of the good turn, to let the bird fly away at his own pleasure. Howbeit, the other and the former narration is more likely to be true, and more constantly affirmed by all good Authors except *Plutarch*. And *Leo Afric* saith, that it was the constant and confident report of all *Africa*, that the Crocodile devoureth all for their love and kindeness, except the *Cledoromychi*, which they cannot, by reason of the thorns upon their head.

That there is an amity and natural concord betwixt Swine and Crocodiles is also gathered, because they only among all other living four-footed Beasts, do without danger dwell, feed and inhabit upon the banks of *Nilus*, even in the midst of Crocodiles; and therefore it is probable that they are friends in nature. But oh how small a sum of friends hath this Beast, and how unworthy of love among all creatures, that never in nature hath but two, in heaven or earth, air or water, that will adventure to come near it, and one of these also, which is the best deserving, it devoureth and destroyeth if it get it within his danger.

Seeing the friends of it are so few, the enemies of it must needs be many, and therefore require a more large catalogue or story. In the first rank whereof cometh, (as worthy the first place) the *Ichneumon*, or *Pharaon*-moule, who rageth against their Egges and their persons, for it is certain that it hunteth with all sagacity of sense to finde out their nests, and having found them, it spoileth, scattereth, breaketh and emptieth all their egges. They also watch the old ones asleep, and finding their mouths open against the beams of the Sun, suddenly enter into them, and being small, creep down their vast and large throats before they beware, and then putting the Crocodile to exquisite and intolerable torment, by eating their guts asunder, and to their soile bellies, while the Crocodile tumbeth to and fro sighing and weeping, now in the depth of water, now on the land, never resting till strength of nature faileth. For the incessant gnawing of the *Ichneumon* do provoketh her to seek her rest in the unrest of every part, herb, element, throws, throbs, rollings, tollings, mournings, but all in vain, for the enemy within her breatheth through her breath, and sporteth her self in the consumption of those vital parts, which waste and wear away by yielding to unspacifiable teeth, one after other, till she that crept in by stealth at the mouth, like a puny thief, come out at the belly like a Conqueror, through a passage opened by her own labour and industry, as we have also shewed at large in the story of *Ichneumon*. But whether it be true or no, that the *Trochilus* doth awake the sleeping Crocodile, when he seeth the *Ichneumon* lie in wait to enter into her, I leave it to the credit of *Strabo* the reporter, and to the discretion of the indifferent Reader.

Monkeys are also the haters of Crocodiles, as is shewed in the story, and lie in wait to discover, and if it were in their power to destroy them. The Scorpion also and the Crocodile are enemies one to the other, and therefore when the *Egyptians* will describe the combat of two notable enemies, they paint a Crocodile and a Scorpion fighting together, for ever one of them killeth another: but if they will deciphere a speedy overthrow to ones enemy, then they picture a Crocodile, if a slow and slack victory, they picture a Scorpion. And as we have already shewed out of *Philes*, that out of the egges of Crocodiles, many times come Scorpions, which devour and destroy them that lay them.

Fishes also in their kinde are enemies to Crocodiles, the first place whereof belongeth to the most noble Dolphin. Of these Dolphins it is thought there be two kinds, one bred in *Nilus*, the other forrain and coming out of the Sea, both of them professed enemies to the Crocodile: for the first, it hath upon the back of it sharp thorny prickles or fins, as sharp as any spears point, which are well known to the fish that beareth them, as her armour and weapons against all adversaries. In the trust and confidence of these prickles, the Dolphin will allure and draw out the Crocodile from his den or lodging place, into the depth of the River, and there fight with him hand to hand. For the Dolphin as it knoweth his own armour and defence, like other Beasts and Fishes, so doth it know the weakest parts of his adversary, and where his advantage of wounding lyeth. Now, *Strabo*, as we have said already, the belly of the Crocodile is weak, having but a thin skin, and penetrable with small force, wherefore when the Dolphin hath the Crocodile in the midst of the deep waters, like one afraid of the fight, underneath him he goeth, and with his sharp fins or prickles

**Sirabo.**

*Orms*

*Ælianus.*

*Crescenti.*

**Diodorus.**

**Herodotus.**

**Herodotus.**

The medicines arising out of it are also many. The first place belongeth to the cayle, which hath not benefits or vertues in it then can be expressed. The blood of a Crocodile is held profitable for many things, and among other it is thought to cure the bitings of any Serpent. Also by anointing the eyes, it cureth both the dregs or spots of blood in them, and also refresheth soundnesse and clearnesse to the sight, taking away all dullnesse or deadnesse from the eyes. And it is said, that if a man take the liquor which cometh from a piece of a Crocodile fried, and anoint therewithall his wound or harmed part, that then he shall be presently rid of all pain and torment. The skin both of the land and water Crocodile dried into powder, and the same powder with Vinegar or Oyl, laid upon a part or member of the body, to be feared, cut off, or lanced, taketh away all sense and feeling of pain from the instrument in the action.

Dioscorides.  
Arnoldus.









*Vipera filum faciens*, that is, A Viper causing thirst, and therefore *Ovid* sporting at an old drunken woman named *Lene*, collect her *Dipfas* in these verses:

*Est quædam nomine Dipfas anus,  
Ex re riens habet, nigri non illa parentem  
Mementis in roseis sobria vidit equis.*

In English thus;  
*There is a woman old, which Dipfas may be right,  
And not without some cause, thirstily she ever is,  
For never Memento's fire, all black and seldom bright,  
Did she in water sweet behold in sobriety.*

They live for the most part near the waters, and in salt marshy places: whereupon *Lucretius* said;

*Stant in marginis siccæ  
Apsides, & mediis sitibant Dipfides undis.*

That is to say;  
*Upon pits brink dry Apsides there stand,  
And Dipfides thirst in midst of water flood.*

It is called *Torrida Dipfas*, and *Arida Dipfas*, because of the perpetual thirst, and therefore the *Egyptians* when they will signify thirst, do picture a *Dipfas*: whereupon *Lucretius* relateth this story, there is (saith he) a statue or monument upon a Grave, right over against the great *Syris* betwixt *Silya* and *Egypt*, with this Epigram:

*Talla passus erat quoque Tantalus Ebiops ortus,  
Qui nullo potuit fonte levare sitim.  
Tate nec & Danao natam implere puellas  
Affudit undis vas potuisse reor.*

That is to say;  
*Such Tantalus indured in Ebiops bred,  
Which never could by water quench his thirst,  
Nor could the Grecian Maids with water fed,  
That with dayly pourings till the vessel overflowed.*

The statue was the picture of a man like unto *Tantalus*, standing in the midst of a water ready to drink, by drawing in of the water, about whose foot was folded a *Dipfas*: close by flood certain women bringing water, and pouring it into him to make it run into his mouth; besides, there were certain *Egges* as it were of *Ephriches* lay pictured beside them, such as the *Germans* in *Lybia* seek after. For it is reported by *Lucretius*, that the people of that Country do earnestly seek after the *Ephriches* *Egges* upon the sands, not only to eat the meat that is in them; but also to make sundry vessels or instruments of the shell, and among other things they make Caps of them. Near unto these *Egges* do these treacherous Serpents lie in wait, and so while the poor Country man cometh to seek for meat, suddenly he leapeth upon him, and giveth him a mortal wound.

*Alcibiades* hath an Embleme, which he seemeth to have translated out of *Greek* from *Anipen Sidiomus*, of a Falconer, which while he was looking up after Birds for meat for his Hawk, suddenly a *Dipfas* came behinde him and stung him to death. The title of his Embleme is, *Qui alta contemnit cadere*, he that looketh high may fall, and the Embleme it self is this that followeth:

*Dum tardas visco, pedica dum fallis alaudas,  
Et jaşa altivolam figit arundo gram,  
Dipfada non prudens aucupis pede percussit, ultrix*

Which may be thus Englished;

*Whiles Thrush with line, and Lark deceived with net,  
And Crane high flying pierced with force of reed,  
By Falconer was: behold a Dipfas on the foot did set,  
As if it would revenge his bloody soul misdeed.*

*Ille mali, emissum virus ab ore jacit.  
Sic obit, extento qui sidera respicit arx,  
Securus sati quod jaces ante pedes.*

*For poyson out of mouth it cast, and bit his foot,  
Whereof he dyed, like Birds by him deceived,  
Whiles bending bow aloft unto the stars did look,  
Saw not his fate below, which him of life bereaved.*

This *Dipfas* is inferior in quantity unto a *Viper*; but yet killeth by poyson, much more speedily, according to these verses;

*Exigue similis spectatur Dipfas echidna,  
Sed festina magis mors istius occupat agros.  
Parva & lirtida cui circa ultima cauda nigrescit.*

That is to say;

*This Dipfas like unto the Viper small;  
But kills by stroke with greater pain and speed,  
Whose tail at end is soft and black withall,  
That in your death avoid, with careful heed.*

It is but a short Serpent, and so small (as *Arnoldus* writeth,) it killeth before it be espied, the length of it not past a cubit, the fore-part being very thick, except the head which is small, and backward it groweth smaller and smaller: the tail being exceeding little, the colour of the fore-part somewhat white, but set over with black and yellow spots, the tail very black. *Galen* writeth, that the ancient *Marsi* which were appointed for hunting Serpents and Vipers about *Rome*, did tell him that there was no means outwardly to distinguish betwixt the *Viper* and the *Dipfas*, except in the place of their abode, for the *Dipfas* (he saith) keepeth in the salt places; and therefore the nature thereof is more fiery, but the Vipers keep in the dryer Countries, wherefore there are not many of the *Dipfades* in *Italy*, because of the moistnesse of that Countrey, but in *Lybia*, where there are great store of salt marshes. As we have said already, a man or beast wounded with this Serpent, is afflicted with intolerable thirst, insomuch as it is easier for him to break his belly, then to quench his thirst with drinking, always gaping like a Bull, casteth himself down into the water, and maketh no spare of the cold liquor, but continually sucketh it in till either the belly break, or the poyson drive out the life, by overcoming the vital spirits. To conclude, beside all the symptoms which follow the biting of Vipers, which are common to this Serpent, this also followeth them, that the party afflicted can neither make water, vomit, nor sweat, so that they perish by one of these two ways: first either they are burned up by the heat of the poyson, if they come not at water to drink, or else if they come by water, they are so unsatisfiable, that their bellies first swell above measure, and soon break about their privy parts. To conclude, all the affections which follow the thick poyson of this Serpent are excellently described by *Lucretius* in these verses following;

*Signiferum juvenem Tyrrheni sanguinis Aulom  
Tota cepit retrò Dipfas calidatâ monorâ dit.  
Vix dolor aut sensus dentis fuit: ipsaque levi  
Frons caret invidia: nec quicquam plagâ minatur.  
Ecce sibi virtus tacitum, carpitque medullas  
Igna edax, calidæque incendit viscera tabe.  
Exibat humorem circum vitalia fufum  
Fufus, & in sicca linguam torrere palato  
Capit, affluisset qui sudor in artus  
Non fuit, aique oculis lachrymarum vena refugit.  
Non deum imperii, non mæsti jura Catonis  
Adremum tenuere virum, quin spargere signa*

In English thus;  
*Tyrhenian Aulus, the ancient-bearer young,  
Was bit by Dipfas, turning head to heel, (strong,  
No pain or sense of's teeth appear'd, though poyson  
Death darts not frown, the man no harm did feel,  
But he the poyson takes the marrow, and eating fire  
Burning the bowels in arm till all consumed,  
Drinking up the humor about the vital fire,  
And in dry palat was the tongue up burned.  
There was no sweat the sinews to refresh,  
And hairs fled from the vein that feeds the eyes,  
Then Caton's law, nor Empires honor frish,  
This fiery youth could hold: but down the streamer flish,*

*Auderet, totisque furens exquireret agros,  
Quas poscebat aquas, sitiens in corde venenum.  
Ite vel in Tanaim missus, Rhodanumque Padumque,  
Auderet, Nilumque bibens per rura vagantem:  
Accessit morti Libye: fætuque minore  
Famam Dipfas habet teris adjuncta perustis.  
Scruiatur venas penitus squallens arena:  
Nunc redit ad Syrtis & fluitans accipit ore:  
Æquoreusque placet, sed non & sufficit humor.  
Nec semel fistula genus, mortemque veneni:  
Sed prius æst fuit: ferroque aperire tumens  
Suffragit venas, atque os implere crure. Lucan. lib. 9.*

And like a mad man about the fields he runs,  
Poyson force in heart did waters crave:  
Though unto Tanais, Rhodanus, Padus he comes,  
Or Nilus: yet all too little for his heat to have.  
But dry was death, as though the Dipfas force  
Were not enough, but help by heat of earth,  
Then doth he search the sands: but no remorse,  
To Syrtis stowd he hies his mouth of them he fillets,  
Salt water pleases, but it cannot suffice,  
Nor knew he sale, or this kinde venoms death,  
But thought it thirst, and seeing his veins arise  
Them cut, which blood spelt mouth and breath.

The signes of death following the biting of this Serpent, are extreme drought and inflammation both of the inward and outward parts, so that outwardly the parts are as dry as Parchment, or as a sinster against the fire, which cometh to passe by aduotion and commutation of the blood, into the nature of the poyson. For this cause many of the ancients have thought it to be incurable; and therefore were ignorant of the proper medicines, practising only common medicines prescribed against but death. First therefore they use scarification, and make ulcers in the body, cutting off the quick flesh with Oyl, Hens cut asunder alive, and so laid to dry, or else the leaves of Purslain beaten in Vinegar, Barley meal, Bramble leaves pounded with Honey, also Plantain, Hyslop, soaked unto; first, that they be kept from all sharp and salt meats, then, that they be made occasionally to drink Oyl, to procure vomit, and with their vomits which they cast out of their stomach, to give them glysters; that so the waters may be drawn to their lower parts. Besides,

some take medicines out of Fishes, especially such as are salt, and the leaves, bark, or sprigs of Laurel: and to conclude, there is nothing better then Triacle compounded of Vipers flesh. And thus much for the Diplās.

### of the DOUBLE-HEAD.

Because the *Grecians* call this Serpent *Amphibaina*, and the *Latines* from thence *Amphibena*, because it goeth both ways, as if it had two heads and no tail: and for this purpose it is never seen to turn his body, as it were turn about his head. When it hath a purpose to avoid that thing which it feareth, or wherewithal it is offended, he doth but only change his course backward as he went forward; so that it is as happy as *Lynceus*, whom the Poets saign to be very quick-sighted, or as those Monkeys which are said to have eyes in their backs, or rather like to *Janus*, which is said to have two faces, one forward, and another backward, and therefore I have called it Double-head, I trust fitly enough to expesse the *Greek* word, although compounded of two words together, for so is the *Greek* word also, which the *French* do expresse by a like compounded word, *Double-marcheur*, that is, going two ways. It is likewise called *Ankefime*, *Albissimus*, and *Amphisilens*. And thus much may suffice for the name.

It is said that this Serpent is found in the Island *Lemnus*, but among the  *Germans*  it is unknown. There is some question whether it may be said to have two heads or no. *Galen* affirmeth, that it is like a Ship having two fore-parts, that is, one behinde, and another before. *Pliny* also subscribeth hereto, and maketh it a very pestilent Serpent. *Geminus habet caput Amphibaina, tanquam parum esset, uno ore fundi venenum*, saith he. It hath a double-head, as though one mouth were not enough to utter his poyson, according to the saying of the Poet:

*Est gravis in gemitum surgit caput Amphibena  
Serpens qui visu necat & sibilat.*

Which may be Englished thus;

*This Serpent Double-head, is grievous to be seen,  
Whose cloven-head doth kill with sight and hissing keen.*

Unto this also *Ælianus* subscribeth, that it is a true Serpent, and hath two heads, so that whenever it is to go forward, one of them standeth in the place of the tail, but when it is to go backward, then the head becometh the tail, and the tail the head. So also *Mantuan* saith it is a double-headed Serpent, and a fearful stinging Asp. And so generally all the Ancients, until *Matthiolum* and *Grevinus* time, who first of all began to contrary this opinion, affirming it to be impossible in nature, for one Serpent to have two heads, except it be monstrous, and exceed the common course of nature. Such a one was that Serpent with two heads that *Aristotle* speaketh of, which doth easily happen to all those creatures which at one birth bring forth many young ones; for so their bodies may be conjoynd into one, while their heads stand asunder like twain. And they say that this Serpent doth resemble a Worm of the earth, whose head and tail is hard to be distinguished asunder except you see it going. And they say further, that this Serpent is like to the *Soyal*, of which we shall speak afterwards, differing from it in nothing except in going backward and forward, and this is all that they can bring against the opinion of the Ancients, whom I will not stand to confute, but leave the Reader to believe one or other: for it shall not bring to me any great disadvantage, except the losse of this new English name, for I have dealt faithfully with the Reader in setting down the opinion of both sides, and if I do fail in a fit name, yet will I not swerve from the best description of his nature.

The whole proportion of his body is of equal magnitude or greatness, and the two extremities do answer the middle. His eyes are for the most part shut, the colour like earth, not black, but tending to blacknesse, the skin rough and hard, and set over with divers spots: all which properties, or rather parts are thus described by *Niander*.

*Cujus perpetua est cacum caligine lumen,  
Quod latas utring; genas porrectaq; menta,  
Tærcus est illi color, & densissima pellic  
Phurima quam variis distinctam signa figuram,  
Plus aliis alio Serpentibus aggregatendat.*

In English thus:

*Whole eye is ever void of light, because  
Two cheeks both broad and standing up it hides,  
The colour earth, thick skin, with spots in rows,  
Then other Serpents with greater bulk it glides.*

*Solinus* Polibistor affirmeth, that they ingender and bring egges forth of the mouth, that is, out of that mouth which is toward the tail, if there be any such. There is no Serpent that doth more boldly adventure to endure the cold then this doth, for it cometh out of his den not only before other Serpents, but also before the Cuckoe sing, or the Grasshopper cometh forth. They are exceeding

exceeding careful of their egges, and therefore seldom depart from them until they be hatched, whereby also may be collected their great love to their young ones. And further, by their forward and timely coming out of their holes, *Grevinus* maketh a good observation, that their temperament or constitution, is more hot then any other Serpent.

The *Grecians* have all observed, that this kinde of Serpent is hard to be killed, except with a Vine-branch, which they say was demonstrated by *Dionysius*, who being turned by *Juno* into madnesse, one day falling fast asleep, this Serpent leaped upon him and awaked him, wherat he being angry, presently killed it with a Vine-branch. Some have affirmed that a small rod or bat covered with the skin of this Serpent; and so laid beside a man, driveth away all manner of venomous Beasts. A wilde Olive-branch or sprig wapped in this skin, doth cure the senselesse and benumbed estate of the sinews, and also is good for many things, as *Niander* expresseth in these verses:

*Hæc nobis jam crevit, cadentes ligna coloni  
Sedemq; labrant oleastri ex arbore virgam,  
Quæ pedum, striditq; prebent pellicibus Anguis  
Inflammat obvolvunt, quas certis deinde diebus  
Enaretis sunt, cantantes ante cicadas.*

Which may be Englished thus:

*When this is grown, the Peasants cutting wood,  
Do peel a branch taken from Olive-wilde,  
A foot in length, of strained Snakes-skin good;  
Rwelling it up bereith, till days fullfil,*

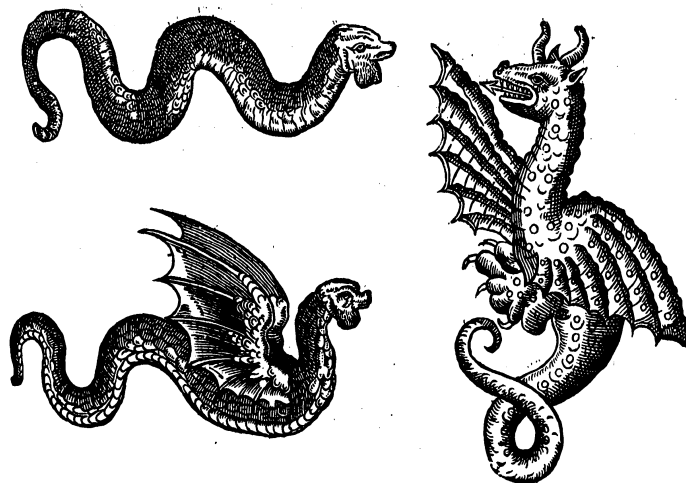
*Vitis hic baculum frigentibus artibus esse  
Fertur, ubi ex animi digitos torpido fatigat,  
Tunc quia constructos, & eorum vincula, nervos  
Galeæ immisso fovet extenditq; calore.*

*And let it dry before Grasshoppers green:  
Thus made, is good for Sinews cold,  
Or nummed fingers, whose force hath been  
By heat extending what cold band did hold.*

The wounds that come by the biting or stinging of this Serpent, are not great, but very small, and scarcely to be discerned outwardly, yet the accidents that follow, are like to those which ensue the bitings of Vipers, namely, inflammation; and a lingering death. The cure thereof must be the same which is applied unto the sting of Vipers. And peculiarly I finde not any medicine serving for the cure of this poyson alone, except that which *Pliny* speaketh of; namely Coriander drunk by the patient, or laid to the fore.

It is reported by *Galen* and *Grevinus*, that if a woman with childe do chance to go over one of these Double-headed Serpents dead, she shall suffer abortion, and yet that they may keep them in their pockets alive without danger in boxes. The reason of this is given by *Grevinus*, because of the vapour ascending from the dead Serpent, by a secret antipathy against humane nature, which suffocate the childe in the mothers womb. And thus much for this Serpent.

### of the DRAGON.



Among all the kinds of Serpents, there is none comparable to the Dragon, or that affordeth and yeeldeth so much plentiful matter in History for the ample discovery of the nature thereof; and therefore herein I must borrow more time from the residue, then peradventure the Reader







*Polypus apparet species pulchro illius ore,  
Tunc conspicui se produnt ordine dentes,*

Which may be Englished thus;

Their form of presence outwardly appears  
All beautiful, and in their goudly mouth  
Their teeth stand double, all one within another:  
Conspicuous order so doth bewray the truth.

*Magna sub egregia cintillant lumina fronte,  
Tinctaq; selle tegunt iorum palcaria mentum.*

Under their brows, which are both great and wide,  
Stand twinkling eyes, as bright as any star,  
With red galls tincture are their dewlaps dyed,  
Their chinor under-chap to cover far.

Gillius, Pterius, and Grevinus, following the authority of this Poet, do affirm that a Dragon is of a black colour, the belly somewhat green, and very beautiful to behold, having a treble row of teeth in their mouths upon every jaw, and with most bright and clear seeing eyes, which caused the Poets in their writings, that these Dragons are the watchfull keepers of Treasures. They have also two dewlaps growing under their chin, and hanging down like a beard, which are of a red colour: their bodies are set all over with very sharp scales, and over their eyes stand certain flexible eye-lids. When they gape wide with their mouth, and thrust forth their tongue, their teeth seem very much to resemble the teeth of wilde Swine: And their necks have many times grosse chick hair growing upon them, much like unto the bristles of a wilde Boar.

Their mouth, (especially of the most tameable Dragons) is but little, not much bigger then a pipe, through which they draw in their breath, for they wound not with their mouth, but with their tails only beating with them when they are angry. But the Indian, Ethiopian, and Phrygian Dragons, tails only wide mouths, through which they often swallow in whole fowls and beasts. Their tongue have very broad mouths, through which they often swallow in whole fowls and beasts. Their tongue is cloven as if it were double, and the Investigators of nature do say, that they have fifteen teeth of a side. The males have combs on their heads, but the females have none, and they are likewise distinguished by their beards.

They have most excellent senses both of seeing and hearing, and for this cause their name *Dragon* cometh of *Derkein*, and this was one cause why *Jupiter* the Heathens great God, is said to be metamorphosed into a Dragon, whereof their fithyeth tale: when he fell in love with *Persephone*, he ravished her in the likeness of a Dragon; for he came unto her and covered her with the spires of his body; and for this cause the people of *Sabazii* did observe in their mysteries or sacrifices the shape of a Dragon rowled up within the compass of his spires: so that as he begot *Ceres* with child in the likeness of a Bull, he likewise deluded her daughter *Persephone* in the likeness of a Dragon; but of these transmutations we shall speak more afterwards, and I think the vanity of these took first ground from the *Africans*, who believe that the original of Dragons took beginning from the unnatural conjunction of an Eagle and a she Wolf. And so they say that the Wolf growing great by this conception, doth not bring forth as at other times, but her belly breaketh and the Dragon cometh out, who in his beak and wings resembleth the Dragon his father, and in his feet and tail, the Wolf his mother: but in the skin neither of them both: but this kinde of fabulous generation is already sufficiently confuted. Their meats are fruits and herbs, or any venomous creature, therefore they live long without food, and when they eat, they are not easily filled. They grow most fast by eating of eggs, in devouring whereof they use this Art, if it be a great Dragon, he swalloweth it up whole, and then rowleth himself, whereby he crusheth the egges to pieces in his belly, and so nature catcheth out the shells and keepeth in the meat. But if it were a young Dragon, as if it be a Dragons whelp, he taketh the egge within the spire of his tail, and so crushed it hard, and holdeth it fast, untill his scales open the shell like a knife, then sucketh he out of the place opened all the meat of the egg. In like sort do the young ones pull off the feathers from the fowls which they eat, and the old ones swallow them whole, casting the feathers out of their bellies again.

The Dragons of *Phrygia* when they are hungry, turn themselves towards the West, and gaping wide, with the force of their breath draw the Birds that flie over their heads into their throats, which some have thought is but a voluntary lapse of the Fowls, to be drawn by the breath of the Dragon, as by a thing they love, but it is more probable, that some vaporous and venomous breath is sent up from the Dragon to them, that poysoneth and infecteth the air about them, whereby their senses are taken from them, and they astonished fall down into his mouth. But if it fortune the Dragons finde not food enough to satisfie their hunger, then they hide themselves untill the people be returned from the market, or the heard-men bring home their flocks, and upon a sudden they devour either Men or Beasts, which come first to their mouths: then they go again and hide themselves in their dens and hollow Caves of the earth, for their bodies being exceeding hot, they very seldom come out of the cold earth, except to seek meat and nourishment. And because they live only in the hottest Countries, therefore they commonly make their lodgings neer unto the waters, or else in the coldest places among the rocks and stones.

They greatly preserve their health (as *Aristotle* affirmeth) by eating of wilde Lettice, for that they make them to vomit, and cast forth of their stomach whatsoever meat offendeth them, and they are most specially offended by eating of Apples, for their bodies are much subject to be filled with winde, and therefore they never eat Apples, but first they eat wilde Lettice. Their sight also (as *Plutarch* saith) doth many times grow weak and feeble, and therefore they renew and recover the same again by rubbing their eyes against Fennel, or else by eating of it.

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Their age could never yet be certainly known, but it is conjectured that they live long, and in great health, like to all other Serpents; and therefore they grow so great. They do not only live on the land, as we have said already, but also swim in the water, for many times they take the Sea in to swim they four or five of them together, folding their tails like hurdles, and holding up their heads, so swim they over to seek better food in *Arabia*.

We have said already, that when they set upon Elephants, they are taken and killed of men: now the manner how the *Indians* kill the Mountain Dragons is thus; they take a garment of Scarlet, and picture upon it a charin in golden letters; this they lay upon the mouth of the Dragons den, for with the red colour and the gold, the eyes of the Dragon are overcome, and he falleth asleep, the *Indians* in the mean season watching, and muttering secretly words of Incantation; when they perceive he is fast asleep, suddenly they strike off his neck with an Ax, and so take out the balls of his eyes, wherein are lodged those rare and precious stones which contain in them vertues unutterable, as hath been evidently proved by one of them, that was included in the Ring of *Gyger*. Many times it falleth out, that the Dragon draweth in the *Indian* both with his Ax and Instruments into his den, and there devourth him, in the rage whereof, he so beateh the Mountain that it shaketh. When the Dragon is killed, they make use of the skin, eyes, teeth, and flesh; as for the flesh, it is of a vitreal or glassie colour, and the *Ethiopians* do eat it very greedily, for they say it hath in it a refrigerative power. And there be some which by certain incanting verses do tame Dragons, and rideth upon their necks, as a man would ride upon a Horse, guiding and governing them with a bridle.

Now because we have already shewed, that some Dragons have wings, left it should seem uncredible, as the foolish world is apt to believe no more then they see, I have therefore thought good to add in this place, a particular relation of the testimonies of sundry learned men, concerning these winged Serpents or Dragons. First of all *Megasthenes* writeth, that in *India* there be certain flying Serpents, which hurt not in the day, but in the night time, and these do render or make a kinde of urine, by the touching whereof, all the parts of mortal creatures do rot away. And there is a Mountain which divideth aunder the Kingdom of *Narisinga* from *Alabaria*, wherein be many winged Serpents sitting upon trees, which they say poyson men with their breath. There be many pestilent winged Serpents which come out of *Arabia* every year by troops into *Egypt*, these are destroyed by a certain black Bird called *Ibis*, who fighteth with them in the defence of that Country where she liveth, so that there lie great heaps of them many times destroyed upon the earth by these Birds, whose bodies may be there visibly seen to have both wings and legs, and their bones being of great quantity and nature, remain unconsumed for many years after. These kinde of Serpents or Dragons, covet to keep about Trees of Frankincense which grow in *Arabia*, and when they are driven away from thence with the fume or smoak of *Scirax*, then they flie (as is aforesaid) into *Egypt*, and this is to be considered, that if it were not for this *Scirax*, all that Country would be consumed with Dragons.

Neither have we in *Europe* only heard of Dragons and never seen them, but also even in our own Country, there have (by the testimony of sundry Writers) divers been discovered and killed. And first of all, there was a Dragon or winged Serpent brought unto *Francis* the French King, when he lay at *Sandun*, by a certain Countryman, who had slain the same Serpent himself with a Spade, when it set upon him in the fields to kill him. And this thing was witnessed by many learned and credible men which saw the same: and they thought it was not bred in that Country, but rather driven by the winde thither from some forain Nation. For *France* was never known to breed any such Monsters. Among the *Pyrenies* also, there is a cruel kinde of Serpent, not past four foot long, and as thick as a mans arm, out of whose sides grow wings much like unto griffles.

*Clerus* also saith, that in the year of our Lord 1543, there came many Serpents both with wings and legins into the parts of *Germany* neer *Stiria*, who did bite and wound many men incurably. *Cardan* also describeth certain Serpents with wings, which he saw at *Paris*, whose dead bodies were in the hands of *Gulielmus Masfion*, he saith that they had two legs and small wings, so that they could scarce flie, the head was little, and like to the head of a Serpent, their colour bright, and without hair or feathers, the quantity of that which was greatest, did not exceed the bignesse of a Cony, and it is said they were brought out of *India*. Besides, a further confirmation of these Beasts, there have been noted in all ages; for it is written in the *Roman* Chronicles, the times of their apparition and manifestation.

When the River of *Tiber* over-flowed above the banks, then were many Serpents discovered, and many Dragons, as in the time of *Mauritius* the Emperor, at what time a Dragon came along by the City of *Rome*, upon the waters in the sight of all men, and so passed to the Sea: after which prodig, there followed a great mortal pestilence. In the year 1499. the 26. day of May, there came a *Stumpsus* Dragon to the City of *Lucerne*, which came out of the Lake through *Rufa*, down along the River, many people of all sorts beholding the same.

There have been also Dragons many times seen in *Germany*, flying in the air at mid-day, and signifying great and fearful fires to follow, as it happened neer to the City called *Niderburge*, neer to the shore of the *Rheine*, in a marvellous clear Sun-shine day, there came a Dragon three times successively together in one day, and did hang in the air over a Town called *Sandgoarin*, shaking his tail over that Town every time: it appeared visibly in the sight of many of the Inhabitants, and afterwards it came to passe, that the said Town was three times burned with fire, to the great harm and undoing

Crinus.







The greatest discord is betwixt the Eagle and the Dragon, for the Vultures, Eagles, Swans and Dragons, are enemies one to another. The Eagles when they shake their wings, make the Dragons afraid with their rattling noise, then the Dragon hideth himself within his den, so that he never fighteth but in the air, either when the Eagle hath taken away his young ones, and he to recover them flyeth aloft after her, or else when the Eagle meeteth him in her nest, destroying her Eggs and young ones: for the Eagle devoureth the Dragons and little Serpents upon earth, and the Dragons again and Serpents do the like against the Eagles in the air. Yea many times the Dragon attempteth to take away the prey out of the Eagles talons, both on the ground and in the air, so that there ariseth betwixt them a very hard and dangerous fight, which is in this manner described by Nicander.

*Hunc petit insulam magni Jovis armiger hostem,  
Cumque genis parat acre suis ex aethers bellum:  
Pascetem in silvis quam primum videri illum,  
Quod totus serm in midos cum mitibus ovis,  
Et simul ipsa terens, & vastans pignora perdat.  
Non timet hoc Serpens, imò quodam impete dumis  
Proflitens, ipsamque aquilam, leporumque tenellum*

Which may be Englished thus;

*When as the Eagle, Joves great Bird, did see her enemy,  
Sharp war in th' air with beak she did prepare  
Gainst Serpent feeding in the Wood, after espy  
Cause it her Eggs and young fiercely in pieces tare.  
The Serpent not afraid of this, leapt out of thorns  
With force upon the Eagle, holding tender Hare,  
Out of her talons by fraud and force more strong,  
That takes and snatches despite her enemies fear.  
But wary Bird avoids the force, and so they fight again,  
That Victor one of them might joy the prey alone,  
The flying fowl by winding Snake is hunted all in vain,  
Tough up and down his nimble eyes this and that way be gone.*

In the next place we are to consider the enmity that is betwixt Dragons and Elephants, for so great is their hatred one to the other, that in *Ethiopia* the greatest Dragons have no other name but Elephant-killers. Among the *Indians* also the same hatred remaineth, against whom the Dragons have many subtle inventions: for besides the great length of their bodies, wherewithall they clasp and begirt the body of the Elephant, continually biting of him until he fall down dead, and in the which fall they are also bruited to pieces; for the safeguard of themselves they have this device. they get and hide themselves in trees, covering their head, and letting the other part hang down like a rope: in those trees they watch until the Elephant come to eat and crop of the branches, then suddenly before he be aware, they leap into his face, and dig out his eyes, then do they clasp themselves about his neck, and with their tails or hinder-parts, beat and vex the Elephant, until they have made him breathlesse, for they strangle him with their fore-parts, as they beat them with the hinder, so that in this combat they both perish: and this is the disposition of the Dragon, that he never setteth upon the Elephant, but with the advantage of the place, and namely from some high tree or rock.

Sometimes again a multitude of Dragons do together observe the paths of the Elephants, & cross those paths they tie together their tails as it were in knots, so that when the Elephant cometh along in them, they inforce his legs, and suddenly leap up to his eyes, for that is the part they aim at above all other, which they speedily pull out, and so not being able to do him any harm, the poor beast delivereth himself from present death by his own strength, and yet through his blindness received in that combat, he perisheth by hunger, because he cannot choofe his meat by smelling, but by his eye-sight.

There is no man living that is able to give a sufficient reason of this contrariety in nature betwixt the Elephant and the Dragon, although many men have laboured their wits, and framed their inventions to finde out the true causes thereof, but all in vain, except this be one that followeth. The Elephants blood is said to be the coldest of all other Beasts, and for this cause it is thought by most Writers, that the Dragons in the Summer time do hide themselves in great plenty in the waters where the Elephant cometh to drink, and then suddenly they leap up upon his ears, because those places cannot be defended with his trunk, and there they hang fast, and suck out all the blood of his body, until such a time as he poor beast through faintnesse fall down and die, and they being drunk with his blood, do likewise perish in the fall.

The Gryffins are likewise said to fight with the Dragons and overcome them. The Panther also is an enemy unto the Dragons, and driveth them many times into their dens. There is a little Bird called *Capitius*, by eating of which the Dragon refresheth himself when he is wearied in hunting of other beasts. And to conclude, he is an enemy unto all kinde of beasts, both wilde and tame, as may appear by these verses of *Lucan*, where he saith.

*Extrahit ex rapidis vi fraudeque fortior uncis,  
Cautus malum declinat avis, fit ibi aspera pugna,  
Ut queat extoriam victor sibi tollere prædam.  
Sed frustra elapsam, & volitantem hinc inde volutem  
Insequitur, longos sinuum contritus in ubi,  
Obliqueque levanti sursum sua lumina visis.*

*Armeniac; ita fecit,  
Rumpit ingentes oculis verberare Taurus:  
Res tuas facio est Elephas.*

Which may be Englished thus;

*And following close the Herds in field,  
Great Bulls with force of might,  
And Elephants are made to yield  
By Dragons valiant spite.*

In the next place I will passe unto the poyson and venom of Dragons, omitting all Poetical discourses about the worshipping and transmutation of Dragons from one kinde to another, such as are the hairs of *Orpheus*, or the teeth of the Dragon which *Cadmus* slew, into armed men, and such like fables, which have no shew nor appearance of truth, but are only the inventions of men, to utter those things in obscure terms, which they were afraid to do in plain speeches.

It is a question whether Dragons have any venom or poyson in them, for it is thought that he hurteth more by the wound of his teeth, then by his poyson. Yet in *Deut. 22. Moser* speaketh of them as if they had poyson, saying: Their Wine is as the poyson of Dragons, and the cruel venom of Asps. So also *Hesiodorus* speaketh of certain weapons dipped in the poyson of Dragons. For which cause we are to consider, that they wanting poyson in themselves, become venomous two manner of ways: First by the place wherein they live, for in the hotter Countries they are more apt to do harm then in the colder and more temperate, which caused the Poet in his verses to write of them in this manner following;

*Vor quos qui cunctis innosi munia terris  
Serpis aurato nitidi fulgore Dracones,  
Pestiferis ardens facit Africa: Ductis alium  
Aera cum pennis, &c.*

Which may be Englished in this manner;

*You spinning Dragons creeping on the earth,  
Which fiery Asps yield with skin like gold,  
Yet pestilent by but infecting breath,  
Mounted with wings in air we do behold.*

So that which is spoken of the poyson of Dragons infecting the air wherein they live, is to be understood of the Meteor called *Draco-volans* a Fire-drake, which doth many times destroy the fruits of the earth, seeming to be a certain burning fire in the air, sometime on the Sea, & sometime on the land, whereof I have heard this credible story from men of good worth and reputation, happening about some twelve years ago, upon the Western Seas, upon the Coasts of *England*, which because it is well worthy to be kept in remembrance of all posterity, and contained in it a notable work of God, I have thought good to set it down in this place.

There was an old Fisher-man, which with his two hired servants went forth to take fish, according to his accustomed manner and occupation, and having laid their nets, watched them earnestly to finde the booty they came for, and so they continued in their labour untill mid-night or thereabouts, taking nothing. At last there came by them a Fire-drake, at the sight whereof the old man began to be much troubled and afraid, telling his servants, that those sights seldom portended any good, and therefore prayed God to turn away all evil from them, and withall, willed his servants to take up their Nets, lest they did all repent it afterward; for he said he had known much evil follow such apparitions. The young men his servants comforted him, telling him that there was no cause of fear, and that they had already committed themselves into the hands of Almighty GOD, under whose protection they would tarry untill they had taken some fish: the old man relied contented with their confidence, and rather yielded unto them, then was perswaded by them. A little while after the Fire-drake came again, and compassed round about the Boat, and ran over the Nets, so that new fears, and more violent passions then before possessed both the old man and his servants. Wherefore they then resolved to tarry no longer, but hasted to take up their Nets and be gone. And taking up their Nets, at one place they did hang so fast, as without breaking they could not pull them out of the water, wherefore they let their Grab-hooks unto them to loose them; for the day before they remembered that a Ship was cast away in the same place, and therefore they thought that it might be the Nets were hanged upon some of the tacklings thereof: and therein they were not much deceived, for it happened that finding the place whereupon the Net did stay, they pulled and found some difficulty to remove it, but at last they pulled it up, and found it to be a chair of beaten gold. At the sight hereof their spirits were a little revived, because they had attained so rich a booty, and yet like men burdened with wealth, (especially the old man,) conceived new fears, and wished he were on land, lest some storm should fall, and lay both it and them the second time in the bottom of the Sea.

So great is the impression of fear, and the natural presage of evil, in men that know but little in things to come, that many times they prove true Prophets of their own destruction, although they

they have little reason till the moment of perill come upon them: and so it fell out accordingly in this old man; for whilest he feared death by storms and tempests on the Sea, it came upon him, but by another way and means. For behold the Devill entered into the hearts of his two servants, and they conspired together to kill the old man their Master, that so between themselves they might be owners of, that great rich chair, the value whereof (as they conceived) might make them Gentlemen, and maintain them in some other Country all the days of their life. For such was the resolution that they conceived upon the present, that it would not be safe for them to return home again after the fact committed, lest they should be apprehended for murder, as they justly deserved, their Master being so made away by them.

The Devill that had put this wicked motion into their mindes, gave them likewise present opportunity to put the same in execution, depriving them of all grace, piety, and piety, still thrusting them forward to perform the same: So that not giving him any warning of his death, one of them in most savage and cruel manner dashed out his brains, and the other speedily cast him into the Sea. And thus the fear of this old man, conceived without all reason, except superstition for the sight of a Fiery-drake, came upon him in a more bloody manner then he expected: but life suspected it self, and rumors of perill unto guilty consciences, (such as all we mortal men bear) are many times as forcible as the sentence of a Judge to the heart of the condemned prisoner; and therefore it were happy that either we could not fear, except when the causes are certain, or else that we might never perill but upon premonition. And therefore I conclude with the example of this man, that it is not good to hold a superstitious fear, lest God see it, and being angry therewith, bring upon us the evil which we fear. But this is not the end of the story, for that Fiery-drake, (as by the sequel appeareth) proved as evil to the servants as he did to the Master.

These two sons of the Devill, made thus rich by the death of their Master, forthwith they failed towards the Coast of France, but first of all they broke the Chair in pieces, and wrapped it up in one of their Nets, making account that it was the best fish that ever was taken in that Net, and so they laid it in one end of their Bark or Fisher-boat. And thus they laboured all that night and the next day, till three or four of the clock, at what time they espied a Port of Britain, whereof they were exceeding glad, by reason that they were weary, hungry, and thirsty with long labour, always rich in their own conceit by the gold which they had gotten, which had so drawn their hearts from God, as they could not fear any thought of his judgement; And finally it so blinded their eyes, and stopped their ears, that they did not see the vengeance that followed them, nor hear the cry of their Masters blood. Wherefore, as they were thus rejoycing at the sight of land, behold they suddenly espied a Man of War coming towards them, whereat they were appalled, and began to think with themselves that their rich hopes were now at an end, and they had laboured for other, but yet resolved to die rather then to suffer the booty to be taken away from them. And while they thus thought, the Man of War approached and hailed them, summoning them to come in and show what they were: they refused, making forward as fast to the Land as they could. Wherefore the Man of War shot certain Muskets at them, and not prevailing, nor they yielding, sent after them his Long-boat, upon the entrance thereof they fought manfully against the assailants, until one of them was slain, and the other mortally wounded; who seeing his fellow kill'd, and himself not likely to live, yet in envy against his enemy, ran presently to the place where the Chair lay in the Net, and lifting the same up with all his might, cast it from him into the Sea, instantly falling down after that fact, as one not able through weakness to stand any longer: whereupon he was taken and before his life left him he related the whole story to them that took him, earnestly desiring them to signify so much into England, which they did accordingly: and as I have heard, the whole story was printed, and so this second History of the punishment of murder, I have related in this place, by occasion of the Fiery-drake, in the History of the Dragon.

A second cause why poyson is supposed to be in Dragons, is for that they often feed upon many venomous roots, and therefore their poyson sticketh in their teeth, whereupon many times the prey bitten by them, seemeth to be poysoned; but this falleth out accidentally, not from the nature of the Dragon, but from the nature of the meat which the Dragon eateth. And this is it which *Homer* knew and affirmed in his verses, when he described a Dragon making his den neer unto the place where many venomous roots and herbs grew, and by eating whereof he greatly annoyeth mankind when he bitech them.

*Or de Dragon est Xein oresteros andra menesi  
Bebrosos kaka pharmaka.*

Which may be thus Englished,

*And the Dragon which by men remains,  
Eats evil herbs without deadly paine.*

And therefore *Ælian* saith well, that when the Dragon meaneth to do most harm to men, he eateth deadly poysonful herbs, so that if he bite after them, many not knowing the cause of the poyson, and seeing or feeling venom by it, do attribute that to his nature which doth proceed from his meat. Besides his teeth which bite deep; he also killeth with his tail, for he will so begit and pinch in the body, that he doth gripe it to death, and also the strokes of it are so strong, that either they kill thereby forthwith, or else wound greatly with the same, so

*Vincensius  
Solinus.*

that the strokes of his tail, are more deadly then the biting of his teeth; which caused *Nicomachus* to write thus;

*Nec tam in ille graves, ut cetera turba, dolores  
Si velit, infans cum forte monderet ore,  
Suscitat: exiguu non nocid vulnera punctus*

*(Qui ceu rodentes nostu quoque obvia muris)  
Infigit, modicum remis dat plagas cruorem.*

Which may be thus Englished;

*Nor yet be when with his angry mouth  
Doth bite, such pains and torments bringeth  
At other Serpents, if Ancients tell the truth,  
When with his teeth and spear he stingeth:*

*For at the holes which biting Mice do leave,  
When in the night they light upon a prey,  
So small are Dragon-bites which men receive,  
And barmlesse wound maketh blood to run away.*

Their mouth is small, and by reason thereof they cannot open it wide to bite deep, so as their biting maketh no great pain; and chose kinde of Dragons which do principally fight with Eagles, are defended more with their tails then with their teeth: but yet there are some other kinde of Dragons, whose teeth are like the teeth of Bears, biting deep, and opening their mouth wide, wherewith all they break bones, and make many bruises in the body, and the males of this kinde bite deeper then the females, yet there followeth no great pain upon the wound.

The cure hereof is like to the cure for the biting of any other Beast wherein there is no venom, and for this cause there must be nothing applyed thereunto which cureth venomous bitings, but rather such things as are ordinary in the cure of every Ulcer.

The seed of grass, commonly called Hay-duff, is prescribed against the biting of Dragons. The Barble being rubbed upon the place where a Scorpion of the earth, a Spider, a Sea or Land-dragon bitech, doth perfectly cure the same. Also the head of a Dog or Dragon which hath bitten any one, being cut off and stayed, and applyed to the wound with a little *Euphorbium*, is said to cure the wound speedily.

And if *Albrosimus* be the same that is a Dragon, then according to the opinion of *Avicenna*, the cure of it must be very present, as in the cure of Ulcers. And if *Albrosius* and *Haudem* be of the kinde of Dragons, then after their biting there follow great coldnesse and stupidity; and the cure thereof must be the same means which is observed in cold poysons. For which cause the wound or place bitten, must be embrowed or washed with luke-warm Vinegar, and emplaistered with the leaves of Bay, anointed with the Oyl of herb-Mary, and the Oyl of Wide-pellitory, or such things as are drawn out of those Oyls, wherein is the vertue of Nettles, or Sea-onions.

But those things which are given unto the patient to drink, must be the juice of Bay-leaves in Vinegar, or else equal portions of Myrrhe, Pepper, and Rew in Wine, the powder or dust whereof must be the full weight of a golden groat, or as we say a French Crown.

In the next place, for the conclusion of the History of the Dragon, we will take our farewell of him in the recital of his medicinal vertues, which are briefly these that follow.

First, the fat of a Dragon dried in the Sun, is good against creeping Ulcers: and the same mingled with Honey and Oyl, helpeth the dimnesse of the eyes at the beginning. The head of a Dragon keepeth one from looking aquint: and if it be set up at the gates and dores, it hath been thought in ancient time to be very fortunate to the sincere worshippers of GOD. The eyes being kept till they be stale, and afterwards beat into an Oyl with Honey made into Ointment, keep any one that useth it from the terror of night-visions and apparitions.

The fat of a Hart in the skin of a Roe, bound with the nerves of a Hart unto the shoulder, was thought to have a vertue to fore-shew the judgement of victorie to come. The first spindle by bearing of it, procureth an easie passage for the pacification of higher powers. His teeth bound unto the feet of a Roe, with the nerves of a Hart, have the same power. But of all other, there is no folly comparable to the composition which the Magicians draw out of a Dragon to make one invincible, and that is this: They take the head and tail of a Dragon, with the hairs out of the fore-head of a Lyon, and the marrow of a Lyon; the spume or white mouth of a conquering Horse, bound up in a Harts skin, together with a claw of a Dog, and fastned with the crosse nerves or line of a Hart, or of a Roe; they say that this hath as much power to make one invincible, as hath any medicine or remedy whatsoever.

The fat of Dragons is of such vertue that it driveth away venomous beasts. It is also reported, that by the tongue or gall of a Dragon sod in Wine, men are delivered from the spirits of the night, called *Incubi* and *Succubi*, or else Night-mares. But above all other parts, the use of their blood is accounted most notable. But whether the *Cynabar* be the same which is made of the blood of the Dragons and Elephants, collected from the earth when the Dragon and Elephant fall down dead together, according as *Pliny* delivereth, I will not here dispute, seeing it is already done in the story of the Elephant: neither will I write any more of this matter in this place, but only refer the Reader unto that which he shall finde written thereof in the History of our former Book of Four-footed Beasts.

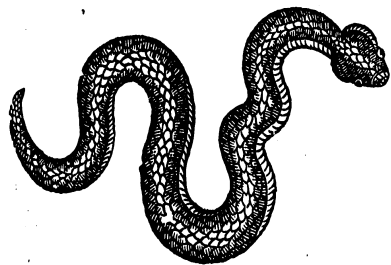
And if that satisfie him not, let him read *Langium* in the first book of his Epistles, and sixty five Epistle, where that learned man doth abundantly satisfie all men concerning this question, that are shadowed of the truth, and not prone to contention. And to conclude, *Andreas Bahucensis* writeth, that the Blood-stone called the *Hamatis*, is made of the Dragons blood: and thus I will conclude.

clude the History of the Dragon, with this story following out of *Porphyry*, concerning the good successe which hath been signified unto men and women, either by the dreams or sight of Dragons.

*Mamma* the Mother of *Alexander Severus* the Emperor, the night before his birth, dreamed that she brought forth a little Dragon, so also did *Olympia* the Mother of *Alexander the Great*, and *Pomponia* the Mother of *Seipio Africanus*. The like prodigy gave *Augustus* hope that he should be Emperor. For when his Mother *Atia* came in the night time unto the Temple of *Apollon*, and had set down her bed or couch in the Temple among other Matrons, suddenly she fell asleep, and in her sleep she dreamed that a Dragon came to her, and clasped about her body, and so departed without doing her any harm. Afterwards the print of a Dragon remained perpetually upon her belly, so as the never durst any more be seen in any bath.

The Emperor *Tiberius Cæsar*, had a Dragon which he daily fed with his own hands, and nourished like good fortune, at the last it happened that this Dragon was defaced with the biting of Emmets, and the former beauty of his body much obscured: Wherefore the Emperor grew greatly amazed thereat, and demanding a reason thereof of the Wilemen, he was by them admonished to beware the insurrection of the common people. And thus with these stories representing good and evil by the Dragon, I will take my leave of this good and evil Serpent.

### Of the DRYINE.



*Viperio generi & graviter spirantibus Hydriis,  
Spargere qui sumos cantus; manuq; solebat.*

Which may be Englished thus;

*Who could by song and hand bring into deadly sleep  
All kinde of Vipers, with Snakes smelling strong and deep.*

Which being compared with that instruction which he giveth to Shepherds, teaching them how to drive away the strong smelling Serpents from the folds, he calleth them *Cbelydri*, when he writeth in this manner;

*Disce & odoratum stabulis accendere Cedrum,  
Galbanisq; agitare graves nidore Chelydros.*

That is to say in English thus;

*Learn how to drive away strong smelling Chelydres  
From folds, by Galbanum and savoury Cedars.*

So that it is clear that these Dryines are the same which are called *Cbelydri*, who do sink on the face of the earth, whereby they are oftentimes disclosed although they be not seen: howbeit, some think that this filthy favour doth not proceed from any fume or smoak coming out of their bodies, but rather from their motion, according to the opinion of *Macer* in these following verses.

*Seu terga expirant spumantia Virum  
Seu terra sumat qua teter labitur Anguis.*

Which may be Englished in this manner;

*Whether their fuming backs that smell  
Do send abroad such poyson pestilence,  
Or whether 'tis earth whereon this Snake full fell  
Doth slide, yields that unwholesome sent.*

It is said that these Dryines do live in the bottom or roots of Oaks, where they make their nests, for which cause they be called *Querculi*, as if they were derived from an Oak, which caused the Countrey people to call it *Dendrogailla*, which signifieth the male and female in this kinde: being bred only in one part of *Africa*, and in *Hellispon*, and there be of them two kinds, one of the length of two cubits, being very fat and round, and very sharp scales over the back; and they are called *Druina* of *Dru*, that signifieth an Oak, because they live in bottom of Oaks: and they are also called *Cbelydri*, because of their sharp skins or scales, for it is the manner of the *Latines* and the *Grecians* to call the hard and rough skin of the body of man and beast, by the name of *Cbelydri*; and I take the Serpents *Cymidri*, to be the same that the Dryines be. Within the scales of this Serpent there are bred certain Flies with yellow wings, as yellow as any Brasse, the which Flies at length do eat and destroy the Serpent that breedeth them. The colour of their back is blackish, and not white as some have thought, and the favour or smell coming from them like to the smell of a Horfes hide, wet as it cometh out of the pit, to be flavoured by the hand of a Taywer or Glover. And *Bellinus* writeth, that he never saw any Serpent greater then this Dryine, which he calleth *Dendrogailla*, nor any that hisseeth stronger; for he affirmeth, that one of these put into a sack, was more then a strong Countreyman could carry two miles together without setting it down and resting. And likewise he saith, that he saw a skin of one of these stuffed with hair, which did equall in quantity the leg of a great man. The head of this beast is broad and flat, and *Olav Magnus* writeth, that many times, and in many places of the North, about the beginning of Summer these Serpents are found in great companies under Oaks, one of them being their head or Captain, who is known by a white crell or comb on the top of his crown, whom all the residue do follow, as the Bees do their King and Captain. And these by the relation of old men are thought to beget a certain stone, by their mutable breathing upon some venomous matter, found in the trees leaves, or earth where they abide: For they abide not only in the roots, but in the hollow bodies of the trees, and sometimes for their meat and food, they leave their habitation, and descend into the Fens and Marshes to hunt Frogs; and if at any time they be assaulted with the Horfe-flie, they instantly return back again into their former habitation. When they go upon the earth, they go directly or straight, for if they should winder themselves to run, they would make an offensive noise, or rather yeeld a more offensive smell: according to these verses of the Poet *Lucan*;

*Natrix & ambigua coleret qui Syrtibus arva  
Chersidros, trahiq; via fumante Chelydri.*

In English thus;

*The Snake which haunt the doubtful Syrtes sands,  
And Chelydres by sliding fume on lands.*

*Georgius Fabricius* writeth, that he saw in the Temple of *Bacchus* at *Rome*, a company of drunken men dancing, leading a male Goat for sacrifice, having Snakes in their mouths, which Snakes *Prudentius* the Christian poet calleth *Cbelydri*, that is, Dryines in these verses following;

*Baccho caper omnibus aris  
Ceditur, & virides discindunt ore Chelydros,  
Qui Bromium placare volunt, quod & ebur iam tum  
Ante oculos regis Satyrorum insania ficit.*

In English thus;

*A Goat to Bacchus on every altar lies,  
While sacrificers tear Dryines in pieces small  
By force of teeth, and that before the eyes  
Of Satyres King, mad drunk they fall.*

The nature of this Serpent is very venomous and hot, and therefore it is worthily placed among the first degree or rank of Serpents, for the smell thereof doth so stupifie a man, as it doth near strangle him, for nature refuseth to breath, rather then to draw in such a filthy air. And so pestilence is the nature of this Beast, that it maketh the skin of the body of a man hurt by it, loose, stinking, and rotten, the eyes to be blinde and full of pain, it restraineth the urine, and if it come upon a man sleeping, it causeth often neezing, and maketh to vomit bloudy matter. If a man tread upon it unawares, although it neither sting nor bite him, yet it causeth his legs to swell, and his foot to lose the skin thereof: and that which is more strange, it is reported, that when a Physitian cured the hand of one bitten by this Serpent, the skin of his hand also came off, and whosoever killeth one of these, if once he smell the favour of it, whatsoever he smelleth afterwards, he still thinketh it smelleth of the Dryine. And therefore most pestilence must this Serpent needs be, which killeth both touching and smelling.

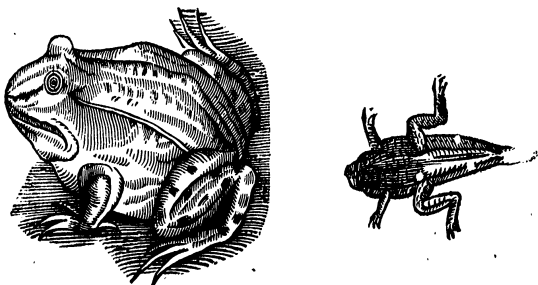
When it hath wounded or bitten, there followeth a black or red swelling about the sore, also a vehement pain over all the body through the speedy dispersing of the poyson; also Bubbles or little wheals, madnesse, driness of the body, and intolerable thirst, trembling and mortification of the members wounded, whereof many die. The cure is like to the cure of Vipers, and besides

besides it is good to take Hart-wort drunk in Wine, or Trifoly, or the roots of Daffadil. Acorns of all kinde of Oaks, are profitable against this poyson, being beaten to powder and drunk. And thus much shall suffice for this Serpent.

### of the Serpents called ELEPHANTS.

Here be also Serpents called Elephants, because whomsoever they bite, they infect with a kinde of leprosie, and I know not whether the Serpent *Elops*, *Elopi*, and *Laphiti* be the same, but because I finde no matter worthy in them to be spoken of, and they are strangers in our Countrey, the Reader must be contented with their bare names without further description.

### OF FROGS.



Frogs are called by the Hebrews, *Zab*, *Zepardea*, *Urdeana*, and *Urdea Akynke*, and Maske; by the Arabians, *Hardun*, *Dislab*, *Dilphoa*, *Disdappa*, *Altahaul*; by the Grecians, *Batrachos*; whereof cometh the corrupted word *Brachias*, and *Garaxum*. *Lalages* and *Kembrole*, signifieth green Frog; the Italians and Spaniards call it *Rana*, by the Latine word; the French, *Grenouille*; the Germans, *Frosch*, and *Frosche*, and *Grassfroch*, for a green Frog. The Flemings, *Urofsch*, and *Uruesch*, and Poles; the Egyptians and Polonians, *Zaba*, by a word derived from the Hebrew. It is some question from whence the word *Rana* is derived, and because of much controversy whether it hath received name, because it liveth on the land and in the water, or from the croaking voyce which it useth: I will not trouble the English Reader with that discourse, only I am assured, that the word Frog in English, is derived from the German word *Frosch*, as many other English words are derived besides the common name of many Frogs. Homer in his Comedy of the fight betwixt Frogs and Mice called *Batrachomachia*, hath devised many proper names for Frogs, such as these are; *Limnucharia*, *Gracelini*, *Pluv*, *Dulliver*; *Hydromedusa*, Water-hunter; *Phnignathos*, Nature-cryer; *Hypsilous*, Loud-cryer; *Lentibius*, Love-liver; *Poluphenos*, great Labourer; *Kramphogaster*, Brasil-eater; *Lymnesos*, Pool-keeper; *Kalmintibus*, Mint-eater; *Hydrocharis*, Water-child; *Borboryssites*, Noise-maker; *Prassipogaster*, Grass-eater; *Pelousios*, dust-creeper; *Pelobater*, dust-leaper; *Kramphosides*, drought-hater; *Prassipogaster*, Grass-green; and such other like, according to the witty invention of the Author, all which I thought good to name in this place, as belonging to this History.

In the next place we are to consider the diversity and kinds of Frogs, as they are distinguished by the place of their abode: for the greatest difference is drawn from thence; if some of them therefore are Water-frogs, and some are Frogs of the land: the Water-frogs live both in the water and on the land, in marshes, standing pools, running streams, and banks of Rivers, but never in the Sea; and therefore *Rana Marina* is to be understood of a Fish, and not a Frog, as *Massarius* hath learnedly proved against *Marcellus*. The Frogs of the land are distinguished by their living in Gardens, in Meadows, in hollow Rocks, and among fruits: all which several differences shall be afterward expressed, with their pictures in their due places: here only I purpose to talk of the vulgar and common Frog, whose picture with her young one is formerly expressed. Beside, these differ in generation: for some of them are engendered by carnal copulation, and of the slime and rottenness of the earth. Some are of a green colour, and those are eaten in Germany and in Flanders; some again are yellow, and some of an Ash-colour, some spotted, and some black, and in outward form and fashion they resemble a Toad, but yet they are without venom, and the female is always greater than the male: when the Egyptians will signify an impudent man, and yet one that hath a good quick sight, they picture a Frog, because he liveth continually in the mire, and hath no blood in his body, but about his eyes.

The tongue is proper to this kinde, for the fore-part thereof cleaveth to the mouth, as in a fish, and the hinder part to the throat, by which he sendeth forth his voyce: and this is to be understood, that all Frogs are mute and dumb, except the green Frogs, and the Frogs of the water, for these have voyces. And many times the voyces of Frogs proceedeth from the nature of the Countreys wherein they

they live: for once all the Frogs in Macedonia and Gyria, were dumb, until there were some brought thither out of some other Countreys, as at this day the Frogs of *Syrina* are all dumb, whereupon cometh the Proverb, *Batrachos es Syrion*, A Frog of *Syrina*, because the Frogs of that Countrey do never croak, although you carry them into any other Countrey.

This *Syrion* is one of the Islands of the *Spartades* in Greece, wherein is the lake called *Pieris*, which doth not run in the Summer, but only in the Winter, and all the Frogs which are cast into that lake, are perpetually silent, and never utter their voyce; whereof there are assigned two causes, one fabulous, and the other true and natural. The first, the *Syrionians* say, that when *Perseus* returned with the head of *Medusa*, having gone very far till he was weary, laid him down beside that lake to sleep, but the croaking Frogs made such a noise, as he could take no rest: Whereat *Perseus* was much offended, and therefore prayed *Jupiter* to forbid the Frogs from crying, who instantly heard his prayer, and enjoyned perpetual silence to the Frogs in that water: and this is the fabulous reason, being a meer fiction of the Poets.

The second and more true reason is that of *Theophrastus*, who saith, that for the coldness of the water, the Frogs are not able to cry in that place. The voyce of Frogs is said by the Latins to be *Caxare*, and by the Grecians, *Ovionon*; peculiar words to set forth this crying: now because their tongue cleaveth to the palat of their mouth, and their voyce proceedeth but from their throat to their mouth, and the spirit is hindered by the tongue, so as it cannot proceed directly; therefore it hath two bladders upon either side of the mouth, one which it filleth with winde, and from thence proceedeth the voyce. Now when it croaketh, it putteth his head out of the water, holding the neather lip even with the water, and the upper lip above the water: and this is the voyce of the male provoking the female to carnal copulation.

They have but very small lungs, and chole without blood, full of froth like to all other creatures of the water, which do lay eggs, and for this cause they do never thirst: wherefore also Sea-crawlers and Frogs are able to live long under the water. They have a double Liver, and a very small milke, their legs behinde are long, which maketh them apt to leap; before they are shorter, having divided claws which are joynted together with a thin broad skin, that maketh them more apt to swim. The most place of their abode is in fens, or in warm waters, or in fish-pools; but yellow and ash-coloured Frogs abide in Rivers, Lakes, and standing Pools, but in the Winter time they all hide themselves in the earth. And therefore it is not true that *Pliny* saith, that in the Winter time they are reformed into lime, and in Summer they resume again their first bodies, for they are to be seen many times in the Winter; especially in those waters that are never frozen, as *Agrolaenae* and *Metabolus* hath foundly observed, and they have been seen in certain running streams, holding small fishes in their mouths, as it were sucking meat out of them.

Sometimes they enter into their holes in Autumn before Winter, and in the Spring time come out again. When with their croaking voyces the male provoketh the female to carnal copulation, which he performeth not by the mouth (as some have thought) but by covering her back: the instrument of generation meeting in the hinder parts, and thus they perform in the night season, nature teaching them the modesty or shamefastness of this action: And besides in that time they have more security to give themselves to mutual embraces, because of a general quietness, for men and all other their adversaries are then at sleep and rest. After their copulation in the waters, there appeareth a thick jelly, out of which the young one is found. But the land Frogs are ingendered out of Eggs of whom we discourse at this present; and therefore they both suffer copulation, lay their Eggs and bring forth young ones on the land. When the Eggs breaketh or is hatched, there cometh forth a little black thing like a piece of flesh, which the Latins call *Gyrini*, from the Greek word *Gyrinos*, having no visible part of a living creature upon them, besides their eyes and their tails, and within short space after their feet are formed, and their tail divided into two parts, which tail becometh their hinder-legs: wherefore when the Egyptians would describe a man that cannot move himself, and afterwards recovereth his motion, they decipher him by a Frog, having his hinder-legs. The heads of these young *Gyrini*, which we call in English Horse-nails, because they resemble a Horse-nail in their similitude, whose head is great, and the other part small, for with his tail he swimmeth. After May they grow to have feet, and if before that time they be taken out of the water, they die, when they begin to have four feet.

And first of all they are of a black colour and round, and hereof came the Proverb, *Rana Gyria semini*, wiser then a Horse-nail; because through the roundness and volubility of his body, it turneth self with wonderful celerity, which way soever it pleaseth. These young ones are also called by the Grecians, *Mulurida*, *Brutiboi*, and *Batrachide*, but the Latines have no name for it, except *Ranunculus*, or *Rana nascent*. And it is to be remembered, that one Frog layeth an innumerable company of Eggs, which cleave together in the water, in the middle whereof she ber self lodgeth. And thus much may suffice for the ordinary procreation of Frogs by generation out of Eggs. In the next place I must also shew how they are likewise ingendered out of the dust of the earth by warm, active, and Summer showers, whose life is short, and there is no use of them.

*Elennus* saith, that as he travailed out of Italy into Naples, he saw divers Frogs by the way near *Pavia*, whose fore-part and head did move and creep, but their hinder-part was unformed and like to the lime of the earth, which caused *Ovid* to write thus;

*Semina limu habet virides generatilia Ranae.*  
*Et generat trunco pedibus, et eodem corpore Sapo.*  
*Altera pars vivit, rudis est; pars altera tellus.*

That is to say:

*Durt bathib seed ingendring Frogs full greem,*  
*So fo as fensle without legs on earth they lie;*  
*Yet as a wonder unto passengers is seen,*  
*One part hath life, the other earth full dead in me.*

And of these Frogs it is that *Pliny* was to be understood, when he saith, that Frogs in the Winter time are resolved into slime, and in the Summer they recover their life and substance again. It is certain also, that sometime it raineth Frogs, as may appear by *Philarchus* and *Lembus*; for *Lembus* writeth thus: Once about *Dardania*, and *Lenia*, it rained Frogs in such plentiful measure; or rather prodigious manner, that all the houses and high ways were filled with them, and the Inhabitants did first of all kill them, but afterwards perceiving no benefit thereby, they shut their doors against them, and stopped up all their lights to exclude them out of their houses, leaving no passage open, so much as a Frog might creep into, and yet notwithstanding all this diligence, their meat feeling on the fire, or set on the table, could not be free from them, but continually they found Frogs in it; so as at last they were enforced to forsake that Countrey. It was likewise reported; that certain *Indians* and people of *Arabia*, were enforced to forsake their Countries through the multitude of Frogs.

*Cardan* seemeth to finde a reason in nature for this raining of Frogs, the which for the better satisfaction of the Reader, I will here expresse as followeth: *Fium hec omnia ventorum ira*, and so forward in his 16. Book *De Subtilitate*, that is to say; these prodigious rains of Frogs and Mee, little fishes and stones, and such like things is not to be wondered at: for it cometh to passe by the rage of the windes in the tops of the Mountains, or the uppermost part of the Seas, which many times taketh up the dust of the earth and congealeth them into stones in the air; which afterwards fall down in rain; so also doth it take up Frogs and Fishes, who being above in the air, must needs fall down again. Sometimes also it taketh up the eggs of Frogs and Fishes, which being kept aloft in the air among the whirl-windes, and storms of shewers, do there engender and bring forth young ones, which afterwards fall down upon the earth, there being no pool for them in the air. These and such like reasons are approved among the learned for natural causes of the prodigious raining of Frogs.

But we read in holy Scripture among the plagues of Egypt, that Frogs were sent by God to annoy them; and therefore whatsoever is the material cause, it is most certain that the wrath of God and his Almighty hand, is the making or efficient cause, and for the worthiness of that divine story, how God maketh and taketh away Frogs, I will expresse it as it is left by the holy Ghost, in ch. 8. *Exod. ver. 5.* *Also the Lord said unto Moses, say thou unto Aaron, stretch thou out thy hand with thy rod upon the streams, upon the rivers, and upon the ponds, and cause Frogs to come upon the land of Egypt.* Ver. 6. *Then Aaron stretched out his hand upon the waters of Egypt, and the Frogs came up and covered the land of Egypt.* Ver. 7. *And the Sorcerers did likewise with their Sorceries, and brought Frogs upon the land of Egypt.* Ver. 8. *Then Pharaoh called for Moses and Aaron, and said; Pray ye unto the Lord, that he may take away the Frogs from me, and from my people, and I will let the people go, that they may do service to the Lord.* Ver. 9. *And Moses said unto Pharaoh, concerning me, Command when I shall pray for thee and thy servants, and thy people, to destroy the Frogs from thee, and from thy house, that they may remain in the River only.* Ver. 10. *Then he said to morrow, and be answered, Be it as thou hast said, that thou must know that there is none like the Lord our God.* Ver. 11. *So the Frogs shall depart from thee, and from thy house, and from thy people, and from thy servants, only they shall remain in the River.* Ver. 12. *Then Moses and Aaron went out from Pharaoh, and Moses cried unto the Lord concerning the Frogs which he had sent unto Pharaoh.* Ver. 13. *And the Lord did according to the saying of Moses, so the Frogs died in the houses, and in the Towns, and in the fields.* Ver. 14. *And they gathered them together by heaps, and the land stank of them, Sec.*

And this was the second plague of Egypt, wherein the Lord turned all the Fishes into Frogs: as the Book of Wisdom saith, and the Frogs abounded in the Kings chamber; and notwithstanding this great judgement of God for the present, Pharaoh would not let the people go, and afterwards that blinde superstitious Nation became worshippers of Frogs, (as *Philastrius* writeth) thinking by this devotion, or rather wickednesse in this observant manner, to pacifie the wrath of God, choosing their own ways before the word of Almighty God: But vain is that worship which is invented without heavenly warrant, and better it is to be obedient to the will of God, then go about to please him with the cogitations of men, although in their pretended holiness we spend much time, wealth, and blood.

There was one *Cypselus*, the father of *Periander*, who by his mother was hid in a Chest called *Kybele*, to be preserved from the hands of certain murderers, which were sent to kill him. Wherefore afterwards the said *Cypselus* consecrated a house at *Delphos* to *Apollo*, because he heard his crying when he was hid in a chest, and preserved him. In the bottom of that house, was the trunk of a *Palmarie* and certain Frogs pictured running out of the same; but what was meant thereby is not certainly known, for neither *Plutarch* which writeth the story, nor *Gherias* which relateth it, giveth any signification

ification thereof; but in another place where he enquireth the reason why the Oracle of *Pylia* gave no answer, he conjectured because it was that the accursed thing brought out of the Temple of *Apollo* from *Delphos*, into the *Corinthian* house, had ingraven underneath the Brazen Palm, Snakes, and Frogs, or else for the signification of the Sun rising.

The meat of Frogs thus brought forth are green herbs and Humble-bees, or Shorn-bugs, which they devour or catch when they come to the water to drink: sometime also they are said to eat earth, but as well Frogs as Toads do eat the dead Mole, for the Mole devoureth them being alive. In the month of *August*, they never open their mouths, either to take in meat or drink, or to utter any voyce, and their chaps are so fast joyned or closed together, that you can hardly open them with your finger, or with a stick. The young ones of this kinde are killed by casting Long-wort, or the leaves of Sea-lettice, as *Helianus* and *Suidas* write: and thus much for the description of their parts, generation, and sustentation of these common Frogs.

The wisdom or disposition of the *Egyptian* Frogs is much commended, for they save themselves from their enemies with singular dexterity. If they fall at any time upon a Water-snake, which they know is their mortal enemy, they take in their mouths a round Reed, which with an invincible strength they hold fast, never letting go, although the Snake have gotten her into her mouth, for by this means the Snake cannot swallow her, and so she is preserved alive.

There is a pretty fable of a great Bull which came to the water to quench his thirst, and whilst the Beast came running greedily into the water, he trod in pieces two or three young Frogs; then one of them which escaped with life, went and told his mother the miserable misfortune and chance of his fellows: he asked who it was that had so killed her young ones, to whom he answered: It was a great one, but how great he could not tell; the foolish Mother-frog desirous to have seen some body in the eyes of her son, began to swell with holding in of her breath, and then asked the young one if the Beast were as big as she? And he answered much greater, at which words she began to swell more, and asked him again if the Beast were so big? To whom the young one answered, Mother leave your swelling, for though you break your self, you will never be so big as he: and I think from this fable came the Proverb, *Rana Gyryna sapienior*, wiser then the young Frog. This is excellently described by *Horace* in his third *Satyre*, as followeth;

*Absentis rana pulvis vituli pede pressis*  
*Unus ubi effugit, matris denarrat, ut ingens*  
*Bellus cognatus elisetti, illa rogare,*  
*Quantum? Num tandem, so inflans, sic magna fuisset?*

*Major dimidio: Num tanto? Cum magis atq;*  
*Se magis inflaret, non sit te ruperit, inquit,*  
*Par eris: hoc a te non multum abluisti imago.*

Which may be Englished thus;

*In old Frogs absence, the young were prest to death*  
*By feet of a great Calf, drinking in the water,*  
*To tell the dam, one ran that scap'd with life and breath,*  
*How a great beast her young to death did scatter.*  
*How great said she? so big? and then did swell.*  
*Greater by half, said he: then she swell more, and said*  
*Thou big? but he: cease swelling dam, for I thee tell,*  
*Though break thy self, like him thou never canst be made.*

There is another pretty fable in *Esope*, tasking discontented persons under the name of Frogs; according to the old verse:

*Et veterem in limo rana cecinere querelam,*  
*Nam neque sicca placet, nec quae signata paludo*  
*Perpetitur, querule semper convivia ranae.*

Which may be Englished in this manner;

*The Frogs amidst the earthly slime,*  
*Their old complaints do daily sing:*  
*Not pleas'd with pools, nor land that drine,*  
*But new displeasures daily bring.*

When *Ceres* went about seeking *Proserpina*, she came to a certain Fountain in *Lycia* to quench her thirst, the uncivil *Lycians* hindered her from drinking, both by troubling the water with their feet, and also by sending into the water a great company of croaking Frogs; whereat the Goddess being angry, turned all those Countrey people into Frogs. But *Ovid* doth ascribe this transmutation of the *Lycians*, to the prayer of *Latona*, when she came to drink of the Fountain to increase the milk in her breasts, at such a time as the nursed *Apollo* and *Diana*, which *Metamorphosis* or transmutation, is thus excellently described by *Ovid*;

*Aeternum flagno (dixit) vivatis in isto.*  
*Evensum optata dea, juven esse sub undis.*  
*Et modo ista cava sommergere membra paludo,*  
*Nunc proferre caput, summum modo gurgite nare,*

*Sapo super ripam flagno consillere, saepe*  
*In gelidos reficere lacus, sed nunc quoque turpis*  
*Litibus exerceat linguas, pullosque pudore*  
*Quomodo sint sub aqua, sub aqua male dicere remant.*

Q99

Von



*Von quoque jam riuus est iustitias colla tumentis:  
 Plaque dilatant patulos commissa videtur.  
 Terge caput tangunt celsa intercepia videtur.*

In English thus;

For ever mought you dwell

In this same pond the said: her with did take off with speed,

For underneath the water they delight to be indeed:

Now drive they to the bottom down, now up their heads they pop,

Another while with sprawling legs they swim upon the top,

And oftentimes upon the banks they have a minde to stomp,

And oftentimes from thence again to leap into the pond:

And there they now do practise still their filthy tongues to scold,

And shamelessly, though underneath the water they do hold

Their former wont of brawling, still avoid the water cold:

Their voices still are hoarse and harsh, their throats have puffed gowls,

Their chops with brawling widened are, their hammer-headed jaws,

Are joined to their shoulders just, the necks of them do seem

Cut off: the ridge bone of their back sticks up with colour green.

Their panch which is the greatest part of all their trunk is gray,

And so they up and down the pond made newly Frogs do play.

Whatsoever the wisdom of Frogs is, according to the understanding of the Poets, this is certain, that they signifie impudent and contentious persons, for this cause there is a pretty fiction in Hell betwixt the two Poets, *Euripides* and *Aeschylus*: for the ending of which controversy, *Bacchus* was sent down to take the worthiest of them out of Hell into Heaven: and as he went over *Charon* Ferry, he heard nothing but the croaking of Frogs, for such contentious spirits do best beset Hell. And thus much shall suffice to have spoken of the wisdom of Frogs.

Their common enemies are the Weasels, Poul-cats, and Ferrets, for these do gather them together, and lay of them great heaps within their dens: whereupon they feed in Winter. The *Hearn* also and *Bittern*, is a common destroyer of Frogs, and so likewise are some kind of *Kites*. The *Night-birds*, *Gimna* and *Gimeta*, the *Water-snake* (at whose presence in token of extreme terror) the *Frog* setteth up her voyce in lamentable manner. The *Moles* are also enemies to Frogs, and it is further said: that if a burning Candle be set by the water side, during the croaking of Frogs, it will make them hold their peace. Men do also take Frogs, for they were wont to bait a hook with a little red wool, or a piece of red cloth, also the gall of a Goat put into a vessel, and set in the earth, will quickly draw unto it all the Frogs that be near it, as if it were unto them a very grateful thing: And thus much shall suffice to have spoken of the enemies of Frogs. Now in the next place we are to consider the several uses, both Natural, Medicinal, and Magical, which men do make of Frogs.

And first of all the green Frogs, and some of the yellow which live in Foulds, Rivers, Lakes, and Fish-pools, are eaten by men; although in ancient time they were not eaten, but only for Physick, for the broth wherein they were sod, and the flesh also, was thought to have vertue in it to cure them which were stricken by any venomous creeping Beast, especially mixed with Salt and Oyl: but since that time *Aetius* discommendeth the eating of Frogs, proving that some of them are venomous, and that by eating thereof, extreme vomits have followed, and they can never be good, except when they are newly taken, and their skins diligently flayed off, and those also out of pure running waters and not out of muddy stinking puddles: and therefore advieth to forbear in plenty of other meat, this wanton eating of Frogs, as things perilous to life and health, and those Frogs also which are molt white when the skin is taken off, are molt dangerous and fullest of venom, according to the counsel of *Piera*, saying;

*Ultima, sed nostros non accessura lebetes,*

*Nolumus, succi est pluvii & limosa maligni.*

*Ni saliat, putris rana paraba titer.*

*Irata est & adhuc rauca coarctat aquis.*

In English thus;

We will not dresse a Frog unless the last of all to eat,

Because the juice thereof is muddy and of rain unclean,

Except it go on earth, prepared way to leap.

For, angry it ever is, and bath hoarse voyce amid the stream.

They which use to eat Frogs, fall to have a colour like lead, and the hotter the Countries are, the more venomous are the Frogs; in colder Countries, as in *Germany* they are not so harmful, especially after the Spring of the year, and their time of copulation passed. Besides, with the flesh of Frogs, they were wont in ancient time to bait their hooks, wherewithal they did take purple Fishes, and they did burn the young Frogs, putting the powder thereof into a Cat, whose bowels was taken out, then rolling the Cat, and after she was roasted, they anointed her all over with Honey, then

laid her by a Wood side, by the odour and favour whereof, all the Wolses and Foxes lodging in the said Wood were allured to come to it, and then the Hunters lying ready in wait, did take, destroy, and kill them. When Frogs do croak above their usual custom, either more often, or more shrill then they were wont to do: they do foreshew rain and tempestuous weather.

Wherefore *Tully* saith in his first Book of Divination, who is it that can suspect, or once think that the little Frog should know thus much, but there is in them an admirable understanding nature, constant and open to it self, but more secret and obscure to the knowledge of men; and therefore speaking to the Frogs, he citeth these verses;

*Vos quoque signa videtis aequal dulcis alumna,*

*Cum clamore paratis inanes fundere voces,*

*Aburdoque sono fuitis & stagna cietis.*

In English thus;

And you O Water-birds which dwell in streams so sweet,

Do see the signes whereby the weather is foretold,

Your crying voyces wherewith the waters are repeat,

Vain sounds, absurdly moving ools and Fountains cold,

And thus much for the natural use of Frogs. Now followeth the Magical, It is said that if a man take the tongue of a Water-frog, and lay it upon the head of one that is asleep, he shall speak in his sleep, and reveal the secrets of his heart: but if he will know the secrets of a woman, then must he cut it out of the Frog alive, and turn the Frog away again, making certain characters upon the Frogs tongue, and so lay the same upon the panting of a womans heart, and let him ask her what questions he will, she shall answer unto him all the truth, and reveal all the secret faults that ever the hath committed. Now if this magical foolery were true, we had more need of Frogs then of Iustices of Peace, or Magistrates in the Common-wealth.

But to proceed a little further, and to detect the vanity of these men, they also say, that the staffe wherewithal a Frog is struck out of a Snakes mouth, laid upon a woman in travail, shall cause an easie deliverance: and if a Man cut off a foot of a Frog as he swims in the water, and binde the same to one that hath the Gout, it will cure him. And this is as true as a shoulder of Mutton worn in ones Hat healeth the Tooth-ach.

Some again do write, that if a woman take a Frog, and spit three times in her mouth, she shall not conceive with childe that year. Also if Dogs eat the pottage wherein a Frog hath been sod, it maketh him dum and cannot bark. And if a Man cast a sod Frog at a Dog, which is ready to assault him, it will make him run away, (I think as fast as an old hungry Horse from a bottle of Hay.) These and such like vanities have the ancient Heathens (ignorant of GOD) firmly believed, till their experience disapproved their inventions, or the sincere knowledge of Religion enlightning their darkness, made them to forsake their former vain errors, which I would to GOD had come sooner unto them, that so they might never have sinned; or else being now come unto us their children, I pray GOD that it may never be removed, left by trusting in lying vanities, we forsake our own mercy. And so an end of the Magical Uses. Now we proceed to the Medicinal, in the biting of every venomous creature. Frogs sod or roasted, are profitable, especially the broth, if it be given to the sick person without his knowledge, mixed with Oyl and Salt, as we have said already. The flesh of Water-frogs is good against the biting of the Sea-hare, the Scorpion, and all kinde of Serpents; against Leprosie and scabs, and rubbed upon the body, it doth cure the same.

The broth taken into the body with roots of Sea-holm, expelleth the Salamander: so also the Egges of the Frog, and the Egges of the Tortoise, hath the same operation, being sod with Camellineth. The little Frogs are an antidote against the Toads and great Frogs. *Albertus* also among other remedies, prescribeth a Frog to be given to sick Faulcons or Hawks; It is also good for cricks in the neck, or the Cramp. The same sod with Oyl, easech the pains and hardness of the joynts and sinews: they are likewise given against an old Cough, and with old Wine and sod Corn drunk out of the Vessel wherein they are sod, they are profitable against the Dropsie, but with the sharpest Vinegar, Oyl, and spume of Niter sod together, by rubbing and anointing, cureth all scabs in Horses, and pestilent tumors.

There is an Oyl likewise made out of Frogs, which is made in this manner; they take a pound of Frogs, and put them into a vessel or glasse, and upon them they pour a pinte of Oyl, so stopping the mouth of the glasse, they leech it as they do the Oyl of Serpents, with this they cure the shrinking of the sinews, and the hot Gout, they provoke sleep, and heal the inflammations in Fevers, by anointing the Temples. The effect of this Oyl is thus described by *Serapion*;

*Sapo ita per vadit vit frigidis, ac remedi arum,*

*Si vix quasto medicamine pulis recedat.*

*Si raram en oleo decoqueris, alijque carum,*

*Membris sove,*

That is to say;

Often are the *snaws* held by force invading cold,  
Which *scarfe* can be repelled back by medicines tried might,  
Then *scelbe* a Frog in purest Oyl, as *Ancients* us have told,  
So *bathe* the members sick therein, Frogs *stesh* call out of sight.

And again in another place he speaking of the cure of the Fever, writeth thus;

*Sed primus est oleo parvus servare Ranae,  
In rivulis, illisque artus perducere Jucco,*

In English thus;

But first let Oyl make hot young Frogs new found  
In ways, therewith bring sinews weak to weal full sound.

To conclude, it were infinite and needlesse to expresse all that the Physicians have observed about the Medicines rising out of the blood, fat, flesh, eyes, heart, liver, gall, intrails, legs, and sperm of Frogs, besides powders, and distillations; therefore I will not weary the Reader, nor give occasion to ignorant men, to be more bold upon my writing of Physick then is reason, lest that be said against me which proverbially is said of unnecessary things, *Rana vinum ministras*, you give Wine to Frogs, which have neither need nor nature to drink it, for they delight more in water. And so I conclude the History of this vulgar Frog.

### of the GREEN FROG.

THIS Frog is called *Calamiter*, and *Dryophytes*, and *Mentis*, and *Rana vivens*. In *Arabic* *Hyphates*, and *Cucumolines*, and *Cucumones*, *Irti*, *Ramula*, *Brezante*, of *Brezain*, to rain, and thereto cometh the faigned word of *Aristophanes*, *Brekekekex Koox*; but I think that as our English word Frog is derived from the German word *Frosch*, so the German *Frosch* from the Greek word *Brex*. It is called also *Zamia*, that is, *Dammus*, losse, hurt or damage, because they live in trees, and many times hurt the Men and Cattle underneath the trees; and therefore called *Zamia*, of the Greek word *Zan*. The *Italians* call it *Racula*, *Ranocchia*, *Lo Ranoceto*, *Ranocchia di rubetto*. The *French*, *Croissin*, and sometimes *Grassiet*, *Verdier*; in *Savoy*, *Rengole*. In *Germany*, *Loufrosch*. In *Poland*, *Zaba Trana*. Some of the *Latines* for difference sake call it *Rana Rubeta*, because it liveth in trees and bushes; and for the same cause it is called *Calamiter*, because it liveth among reeds, and *Dryophytes*, because it liveth sometimes out of trees.

It is the least of all other Frogs, and liveth in trees, or among fruits and trees, especially in the Woods of Hufels, or Vines, for with its short legs it climbeth the highest trees: insomuch that some have thought it had wings. It is green all over the body, except the feet and the fingers, which are of dusky or reddish colour, and the tops of his nails or claws are blunt and round: In the dissection thereof there was blood found in every part of the body, and yet but little. The heart of it is white, the liver black, mixed with the gall. It hath also a milt, and in the end of July it layeth eggs.

It is a venomous Beast, for sometimes Cattle as they browse upon trees, do swallow down one of these upon the leaves not discerning it, because it is of the same colour: but presently after they have eaten it their Bellies begin to swell, which must needs proceed from the poisoned Frog.

A second reason proving it to be venomous, is for that many Authors do affirm, that heretofore it made the *Psittakum*, for the drawing out of teeth by the roots, and for this cause is concluded to be venomous, because this cannot be performed without strong poison. But for the cure of the poison of this Frog, we shall expresse it afterward in the history of the Toad, and therefore the Reader must not expect it in this place. Always before rain they climb up upon the trees and there cry after a hoarse manner very much, which caused the Poet *Serinus* to call it *Ranae gattula quæ sit*: at other times it is mute, and hath no voice: wherefore it is more truly called *Mantis*, that is, a Prophet or a Diviner, then any other kinde of Frog, because other Frogs which are not altogether mute, do cry both for fear, and also for desire of carnal copulation, but this never cryeth but before rain.

Some have been of opinion, that this is a dum Frog; and therefore *Vincenius Bellus* saith, that it is called a mute Frog from the effect: for there is an opinion, that this put into the mouth of a Dog, maketh him dum, which if it be true; it is an argument of the extreme poison therein contained, overcoming the nature of the Dog, whose chiefest senses are his taste and his smelling. And thus much shall suffice for the description of this Frog.



The medicinal vertues observed herein are these that follow. First if a man which hath a cough, do put into the mouth of this Frog, it is thought that it doth deliver him from his cough, and being bound in a Crane's skin unto a mans thigh, procureth venereous desires: but these are but magical devices, and such as have no apparent reason in nature, wherefore I will omit them, and proceed to them that are more reasonable and natural. First, for the Oyl of Frog, that is the best which is made out of the green Frog, as it is observed by *Silvius*; and if they are held betwixt a mans hands, in the fit of hot burning Ague, do much refresh nature, and ease the pain. For Fever-hecks they prepare them thus: they take such Frogs as have white bellies, then cut off their heads and pull out their bowels, afterwards they seethe them in water, until the flesh fall from the bones, then they mingle the said flesh with Barley meal, made into paste, wherewithal they cram and feed Pullen with that paste, upon which the sick man must be fed, and in default of Frogs they do the like with Bels, and other like Fishes. But there is no part of the Frog so medicinable as is the blood, called also the matter or the juyce, and the humor of the Frog, although some of them write, that there is no blood but in the eyes of a Frog: First therefore with this they kill hair, for upon the place where the hair was pulled off, they pour this blood, and then it never groweth more: And this as I have said already, is an argument of the venom of this Frog; and it hath been proved by experience, that a man holding one of these Frogs in his hands, his hands have begun to swell, and to break out into blisters. Of this vertue *Serenus* the Poet writeth thus;

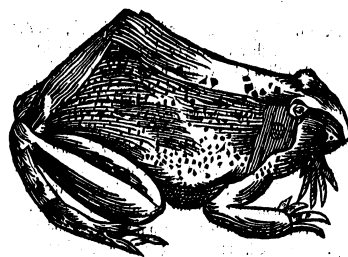
*Præterea quæcumque voles avertere fletus,  
Alque in perpetuum reditura occidere tela,  
Corporibus vulsis sanien perducito ranae,  
Sed quæ parva sita est, & rauce garrula questu.*

That is to say;

Besides, from whatsoever bodies haire thou wilt  
Be clean destroyed, and never grow again  
On them, the matter blood of Frog, all spread and spill,  
I mean the little Frog, questing hoarse voyce amain.

The same also being made into a Verdigrease, and drunk the weight of a Crown, stoppeth the continual running of the urine. The humor which cometh out of the Frog, being alive when the skin is scraped off from her back, cleareth the eyes by an Ointment: and the flesh laid upon them, ease their pains; the flesh and fat pulleth out teeth. The powder made of this Frog being drunk, layeth bleeding, and also expelleth spots of blood dried in the body. The same being mingled with Pitch, cureth the falling off of the hair. And thus much shall suffice for the demonstration of the nature of this little green Frog.

### Of the Padock or Crooked back FROG.



IT is apparent that there be three kinds of Frogs of the earth, the first is the little green Frog; the second is this Padock, having a crook back, called in *Latine*, *Rubra Gibbosa*; and the third is the Toad, commonly called *Rubetax*, *Bufo*. This second kinde is mute and dumb, as there be many kinde of mute Frogs, such as is that which the Germans call *Fourkrout*, and our late Alchymists *Purpurbrunn*, that is, a Fire-frog, because it is of the colour

of fire: This is found deep in the earth, in the midst of Rocks and Stones when they are cleft asunder, and amongst metals, whereinto there is no hole or passage, and therefore the wit of man cannot devise how it should enter therein, only there they find them when they cleave those stones in sunder with their wedges and other instruments. Such as these are, are found near *Tours* in *France*, among a red sandy stone, whereof they make the Millstones, and therefore they break that stone all in pieces before they make the Millstone up, lest while the Padock is included in the middle, and the Millstone going in the mill, the heat should make the Padock swell, and so the Millstone breaking, the corn should be poisoned. As soon as these Padocks come once into the air, out of their close places of generation and habitation, they swell and so die.

This crook-backed Padock is called by the Germans, *Gartenfrosch*, that is, a Frog of the Garden, and *Grasfrosch*, that is, a Frog of the grass. It is not altogether mute, for in time of peril, when they are chased by men, or by Snakes, they have a crying voyce, which I have oftentimes proved by experience, and all Snakes and Serpents do very much hunt and desire to destroy these: also I have seen a Snake



Germany, did picture a woman sitting upon a Toad, to signify covetousness. They also love to eat Serge, and yet the root of Serge is to them deadly poison. They destroy Bees, without all danger to themselves, for they will creep to the holes of their Hives, and there blow in upon the Bees, by which breath they draw them put of the Hive, and so destroy them as they come out. For this cause call the Water-side they lie in wait to catch them. When they come to drink in the day time they fee little or nothing, but in the night time they fee perfectly, and therefore they come them broad.

life or nothing, but in tide might time may be. About their generation there are many worthy observations in nature; sometimes they are bred out of the putrefaction and corruption of the earth; it hath also been seen that out of the ashes of a Toad burnt, not only one, but many Toads have been regenerated the year following. In the New-  
 world there is a Province called *Dartine*, the air whereof is wonderful unwholesome, because all the Country handeth upon rotten marshes. It is there observed, that when the flaves or servants water the pavements of the doores, from the drops of water which fall on the right hand, are infinitely many Toads ingendered, as in other places such drops of water are turned into Gnats. It hath also been seen, that women conceiving with childe, have likewise conceived at the same time a Frog, or a Toad, or a Lizard, and therefore *Platerius* saith, that those things which are medicines to provoke the plentiful course of women, do also bring forth the Secondines. And some have called *Bryonia fratrem Salernitanorum*, & *lactaria fratrem Lombardorum*: that is, a Toad the Brother of the *Salernitanum*, and the Lizard the Brother of the *Lombardi*: for it hath been seen that a woman of *Salernum*, hath at one time brought forth a Boy and a Toad, and therefore he calleth the Toad his Brother; to like a woman of *Lombardy*, a Lizard, and therefore he calleth the Lizard the *Lombardi* Brother. And wife a couple, the women of those Countries, at such time as their childe beginneth to quicken in their womb, do drink the juyce of Parsley and Leeks, to kill such conceptions if any be.

There was a woman neverly married, and when in the opinion of all the was with child, in stead of  
a child she brought forth four little living creatures like Frogs, & yet she remained in good health,  
but a little while after she felt some pain about the rim of her belly, which afterward was eased by  
applying a few remedies. Also there was another woman, which together with a Man-child in her  
Secondines did bring forth such another Beast; and after that a Merchants wife did the like in *Anom-  
um*. But what should be the reason of these so strange and unnatural conceptions, I will not take up-  
on me to decide in nature, left the Omnipotent hand of God should be wronged, and his most se-  
cret and just counsel presumptuously judged and called into question. This we know, that it was  
propheesied in the Revelation, that Frogs and Locusts should come out of the Whore of *Babylon*, and  
the bottomless pit, and therefore seeing the feat of the Whore of *Babylon* is in *Italy*, it may be that  
God, would have manifested the depravation of Chirilian Religion, beginning among the *Italians*,  
and there continued in the conjoynd birth of Men and Serpents: for surely, none but Devils in-  
nate, or men conceived of Serpents brood, would so listfully stand in *Romish* error as the *Italians* do,  
and therefore they seem to be more addicted to the errors of their Fathers, (which they say is the  
Religion wherein they were born) then unto the truth of Jesus Christ, (which both unlearnedly de-  
tect the pride and vanity of the *Romish* faith.

But to leave speaking of the conception of Toads in Women, we will proceed further unto their generation in the stomachs and bellies of men, whereof there may more easily a reason be given then of the former. Now although that in the earth Toads are generated of the polluted earth and waters, yet such a generation cannot be in the body of man, for although there be much water and Worms they are all flesh, and may more easily be conceived of the putrefaction in our stomachs. But then you will say, how comes it to passe that in mens stomachs there are found Frogs and Toads? I answer that this evil hath upon such men as drink water, for by drinking of water, a Toads egge may easily flip into the stomach, and there being of a viscus nature, cleaveth fast to the rough parts of the ventricule, and it being of a contrary nature to man, can never be digested or avoided, and for that cause the venom that is in it, never goeth out of the Egge either in operation or in substance, to poyson the other parts of the body, but there remaineth until the Egge be bred into a Toad, without doing further harm: and from hence it cometh that Toads are bred in the bodies of men, where they may as well live without air, as they do in the midst of trees and rocks, and yet afterwards, these Toads do kill the bodies they are bred in. For the venom is so tempered, that at last it worketh when it is come to ripeness, even as we see it is almost an unthought to take a poyson, whose operation shall not be perceived, till many days, weeks, or months after.

For the cafting out of fuch a Toad bred in the body, this medicine is prefcribed: They take a Serpent and bowel him, then they cut off the head and the tail, the refidue of the body they likewife part, which into fmall pieces, which they fteep in water, and take off the fat which fwimmeth at the top, which is the fick perfon drinketh, until by vomiting he avoid all the Toads in his Stomach, afterwards he muft ufe reftorative and aromatical medicines. And thus much may fuffice for the ordinary and extraordinary generation of Toads.

These Toads do not leap as Frogs do, but because of their swelling bodies and short legs, their place is a soft creeping pace, yet sometimes in anger they lift up themselves, endeavouring to do harm, for great is their wrath, obliquity, and desire to be revenged upon their adversaries; especially the red Toad; for look how much her colour inclineth to redness, so much is her wrath and venom more peltent. If she take hold of any thing in her mouth, she will never let it go till

she die, and many times the fenneth forth poyson out of her buttocks or backer parts, wherewithal she infecteth the air, lowrence of them that do any her; and it is well obserued that the knoweth the weaknes of her teeth, and therefore for her defence she first of all gathereth abundance of airt into her body, wherewithal she gretly sweeteth, and then by sighing uttereth that infected airt as neer the person that offendeth her as she can, and thus she worketh her revenge, killing by the poyson of her breath. The colour of this poyson is like milk, of which I will speak afterward particularly by itself.

A Toad is of a most cold temperment, and had confluxion of nature, and it useth one certain herb wherewithall it preserveth the fight, and also resisteth the poyson of Spiders, whereof I have heard this credible History related, from the mouth of a true honourable man, and one of the most charitable Peers of *England*, namely, the good Earl of *Bridford*, and I was requested to set it down for truth, for it may be justified by many now alive that saw the same.

It fortuned as the said Earl trauielled in *Bedfordshire*, neer unto a Market-town called *Owbury*, some of his company espyed a Toad fighting with a Spyder, under a hedge in a bottom, by the high-way-side, wherewith they stood still; until the Earl their Lord and Master came also to behold the same; and there he saw how the Spyder kill her flanding, and the Toad diuers times went back from the Spyder, and did eat a peece of an herb, which to his iudgement was like a Plantain. At the last, the Earl hauiing seen the Toad do it often, and kill return to the combat against the Spyder, he commaunded one of his men to go, and with his dagger to cut off that herb, which he performed and brought it away. Presently after the Toad returned to seek it, and not finding it according to her expectation swelled and broke in peece: for hauiing received poyson from the Spyder in the combat, nature taught her the vertue of that herb, to expell and drive it out, but wanting the herb, the poyson did instantly work and destroy her. And this (as I am informed) was oftentimes related by the Earl of *Bedford* himself vpon sundry occasions, and therefore I am the bolder to insert it into this story.

I do the more easily believe it, because of another like story related by Erasmus in his Book of Friendship, hapning likewise in England, in manner as followeth. There was a Monk who had in his chamber divers bundles of green rushes, wherewithal he used to throw his chamber at his pleasure, it hapned on a day after dinner; that he fell asleep upon one of those bundles of rushes, with his face upward, and while he there slept, a great Toad came and fate upon his lips, beftring him in such manner as his whole mouth was covered. Now when his fellows saw it, they were at their wits end, for to pull away the Toad was an unavoidable death, but to suffer her to stand still upon his mouth, was a thing more cruel then death; and therefore one of them espying a Spiders web in the window, wherein was a great Spyder, he did advise that the Monk should be carryed to that window, and laid with his face upward right underneath the Spiders web, which was presently accomplished. And as soon as the Spyder saw her adversary the Toad, the presently wove her thread, and descended down upon the Toad, at the first meeting whereof the Spyder wounded the Toad, so that it swelled, and at the second meeting it swelled more; but at the third time the Spyder kild the Toad, and so became grateful to her Host which did nourish her in his Chamber; for at the third time the Toad leaped off from the mans mouth, and swelled to death; but the man was preserved whole and alive. And thus much may suffice for the antipathy of nature betwixt the Toad and the Spyder.

The Mole is also an enemy to the Toad, for as *Alberici* writeth, he himself saw a Toad crying above the earth very bitterly, for a Mole did hold her fast by the leg within the earth, labouring to pull her in again, while the other strove to get out of her teeth, and so on the other side, the Toads do eat the Moles when they be dead. They are also at variance with the Lizard, and all kinds of Serpents, and whenever it receiveth any wound by them, it cureth it self by eating of Plantain. The Cat doth also kill Serpents and Toads, but eateth them not, unless she presently drinks the Geth for it. The Buzzard and the Hawk are destroyers of Toads, but the Stork never destroyeth a Toad to eat it, except in extremity of famine, whereby is gathered the venomous nature of the Toad.

Now to conclude, the premises considered which have been said of the Toad, the uses that are to follow are not many, except those which are already related in the Frog. When the *Spaniards* were in *Biscay*, an Island of the *New-found-world*, they were brought to such extremity of famine, that a sick man amongst them was forced to eat two Toads, which he bought for two pieces of gold-price, worth in *Spain* many fix. Duckets. I do marvel why in ancient time the *Kings of France* gave in their Armies *Legals* in a yellow fish, which were afterwards changed by *Clodoveus* into three *Flowers-de-luce* in the field. *Azure*, a *Argent* unto him from Heaven.

When the *Trojans* dwellers near *Mauin*, after the destruction of *Troy*, they were very much annoyed by the Gubly, therefore *Matymurus* their King, determined to leave that Country, and to seek some where else a more agreeable habitation. Being thus minded, he was admonished by an Oracle that he should go and dwell in that Country where the River *Rhene* falleth into the Sea, and he was also stirred up to take upon him that journey, by a certain Magician-woman, called *Atramma*, for this cunning Woman caused in the night-time a deformed apparition to come unto him having three heads, one of an Eagle, another of a Toad, and the third of a *Lion*; and the Eagles head did speak unto him in this manner, *Gumtunw* *Marcomirus* appretmet me, & concubabit. *Leonem*, & interficiet *hufum*; that is to say, Thy flock or posterity, O *Marcomirus*, shall oppress me; it shall tread the *Lion* under foot, and kill the Toad. By which words he gathered, that his posterity should rule over the *Romans*,

signified by the Eagle; and over the Germans, signified by the Lyon; and over the French, signified by the Toad, because the Toad, as we have said, was the ancient Arms of France.

It is an opinion held by some Writers, that the Weasels of the water do ingender in copulation with the Toads of the water, for in their mouths, and feet of their belly, they do resemble them: Whereupon these verses were made;

*Bufores gleno putrida tellure sepulta,  
Humores pluvil forte quod ambo junius,  
Humet is & friget, mea sic vis humet & alget,  
Cum perit in terra qui prim ignis erat.*

Which may be Englished thus;

*Buried in rotten earth, forth Toads I bring,  
Perhaps because we both are made of rain,  
That's moist and cold, moist I and ever freezing,  
When in the earth, that force from fire came.*

And thus we will descend to discourse of the Toads poyson, and of the special remedies appointed for the same. First therefore, all manner of Toads, both of the earth and of the water are venomous, although it be held that the Toads of the earth are more poysonful then the Toads of the water, except those Toads of the water which do receive infection or poyson from the water, for some waters are venomous. But the Toads of the land, which do descend into the marshes, and so live in both elements, are most venomous, and the hotter the Country is, the more full are they of poyson. The Women-witches of ancient time which killed by poysoning, did much use Toads in their confessions, which caused the Poet in his verses to write as followeth.

*Occurrit Matriona potens, qua mille Calenum  
Porre dura viro, misert sitiente tubetam.*

Which may be Englished thus;

*There came a rich Matron, who mixed Calen Wine,  
With poyson of Toads to kill her Spouse, O deadly crime.*

And again in another place,

*Funus promittere patri  
Nec volo nec possum ranarum, in viscera nunquam  
Inspecti.*

In English thus;

*I can nor will of Fathers death a promise make,  
For of Toads poyson I never yet a view did take.*

When an Asp hath eaten a Toad, their biting is incurable, and the Bears of Pamphilia and Glicia, being killed by men after that they have eaten Salamanders or Toads, do poyson their eaters. We have said already, that a Toad hath two livers, and although both of them are corrupted, yet the one of them is said to be full of poyson, and the other to resist poyson. The biting of a Toad, although it be seldom, yet it is venomous, and causeth the body to swell and to break, either by Impollution, or otherwise, against which is to be applied common Antidotes, as womens Milk, Triacle, roots of Sea-holm, and such other things. The spittle also of Toads is venomous, for if it fall upon a man, it causeth all his hair to fall off from his head; against this evil Paracelsus prescribeth a plaister of earth, mixed with the spittle of a man.

The common people do call that humor which cometh out of the buttocks of a Toad when the swelleth, the urine of a Toad, and a man moistened with the same, be-pissed with a Toad; but the best remedy for this evil, is the milk of a woman, for as it resembleth the poyson in colour, so doth it resist it in nature. The bodies of Toads dried, and so drunk in Wine alter they be beaten to powder, are a most strong poyson, against which and all other such poyson of Toads, it is good to take Plantain and black Hellebore, Sea-crabs dried to powder and drunk, the stalks of Dogs-tongue, the powder of the right horn of a Hart, the milk, spleen, and heart of a Toad. Also certain fishes called Shel-crabs, the blood of the Sea-tortoise mixed with Wine, Cummin, and the rennet of a Hare. Also the blood of a Tortoise of the land mixed with Barley-meal, and the quintessence of Triacle and Oyl of Scorpions, all these things are very precious against the poyson of Serpents and Toads.

We have promised in the story of the Frog, to expresse in this place such remedies, as the learned Physicians have observed for the cure of the poyson of Frogs. First therefore the poyson of the Frog causeth swelling in the body, depelleth the colour, bringeth difficulty of breathing, maketh the breath strong, and an involuntary profusion of seed, with a general dullness and heaviness of body: for remedy whereof, let the party be enforced to vomit by drinking sweet Wine, and two draughts of the powder of the root of Reeds or Cypress. Also he must be enforced to walking and running, besides daily washing. But if a Fever follow the poyson or burning in the extremities, let the vomit be of water and Oyl, or Wine and Pitch; or let him drink the blood of a Sea-tortoise, mixed with Cummin, and the rennet of a Hare, or else sweat in a Furnace or Hot-house a long time: besides many other such like remedies, which every Physician, both by experience and reading, is able to minister in cases of necessity, and therefore I will spare my further pains from expressing

expressing them in this place, and passe on to the medicinal vertues of the Toad, and so conclude this history.

We have shewed already that the Toad is a cold creature, and therefore the same sod in water, and the body anointed therewith, causeth hair to fall off from the members so anointed. There is a medicine much commended against the Gowt, which is this: Take six pound of the roots of wilde Cucumber, six pound of sweet Oyl, of the marrow of Harts, Turpentine, and Wax, of either six ounces, and six Toads alive, the which Toads must be bored through the foot, and hanged by a thred in the Oyl until they grow yellow, then take them out of the Oyl by the threds, and put into the said Oyl the sliced root of a Cucumber, and there let it see the until all the vertue be left in the Oyl. Afterwards melt the Wax and Turpentine, and then put them all together in a glasse, so use them morning and evening against the Gowt, Sciatica, and pains of the sinews, and it hath been seen that they which have lyen long sick, have been cured thereof, and grown perfectly well and able to walk. Some have added unto this medicine Oyl of Saffron, Opobalsamum, bloud of Tortoises, Oyl of Sabine, Swines grease, Quicksilver, and Oyl of Bays.

For the scabs of Horses, they take a Toad killed in wine and water, and so sod in a brazen vessel, and afterwards anoint the Horse with the liquor thereof. It is also said that Toads dried in smoak, or any piece of them carried about one in a linnen cloth, do stay the bleeding at the nose. And this Frederick the Duke of Saxony, was wont to practise in this manner; he had ever a Toad pierced through with a piece of wood, which Toad was dried in the smok or shadow, this he rowled in a linnen cloth; and when he came to a man bleeding at the nose, he caused him to hold it fast in his hand until it waxed hot, and then would the bloud be stayed. Whereof the Physicians could never give any reason, except horror and fear constrained the bloud to run into his proper place, through fear of a Beast so contrary to humane nature. The powder also of a Toad is said to have the same vertue, according to this verse;

*Buffo utrum sinit natura dose cruento.*

In English thus;

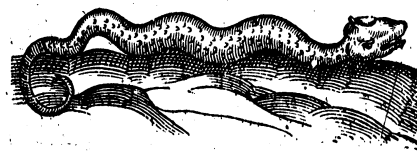
*A Toad that is burned to ashes and dust,  
Stays bleeding by gift of Nature just.*

The skin of a Toad, and shell of a Tortoise, either burned or dried to powder, cureth the Fistulas: Some add hereunto the root of Laurel and Hen-dung, Salt, and Oyl of Mallows. The eyes of the Toad are received in Ointment against the Worms of the belly. And thus much shall suffice to have spoken of the history of the Toad and Frogs.

### Of the GREEN SERPENTS.

IN vain there are certain Green-serpents, which of their color are called Grunling, and I take them to be the same which Hesychius called Sauria, and Pliny by a kinde of excellency, Snakes, of whom we shall speak afterwards, for I have no more to say of them at this present, but that they are very venomous. And it may be that of these came the common proverb, *Latet Anguis sub herba*, under the green herb lyeth the Green-snake, for it is a friendly admonition unto us to beware of a fallshood covered with a truth like unto it.

### Of the HAMORRHE.



THIS Serpent hath such a name given unto it, as the effect of his biting worketh in the bodies of men, for it is called in *Latine*, *Hamorrhoe*, to signifie unto us the male, and *Hamorrhoe*, to signifie the female, both of them being derived from the *Greek* word *Dima*, which signifieth bloud, and *Kes*, which signifieth to flow, because whomsoever it bitech, it maketh in a continual bleeding sweat, with extremity of pain until it die. It is also called *Aspidium*, and *Aspidum*, *Sabrine*, and *Halidum*, or *Alfordum*, which are but corrupted barbarous names from the true and first word *Hamorrhoe*.

It is doubtful whether this be to be ascribed to the Asps or to the Vipers, for *Isidore* saith it is *Pliny* a kinde of Asp, and *Helianus*, a kinde of Viper. They are of a sandy colour, and in length not past one foot, or three handfulls, whose tail is very sharp or small, their eyes are of a fiery-flaming colour, their



their head small, but hath upon it the appearance of horns. When they goe, they go straight and slowly, as it were halting and wearily; whose pace is thus described by Nicander;

*Et instar  
Ipsius oblique sua parvula terga Cerasæ  
Claudicat: ex multo videtur appellere dorso*

In English thus;  
And like the Horned-Serpent, so trails it off on land,  
As though on back a little boat it drove,  
His sliding belly makes path be seen in sand,  
As when by dead Reeds she goes her life to save.

The scales of this Serpent are rough and sharp, for which cause they make a noise when they goe on the earth; the female resteth her self upon her lower part near her tayl, creeping altogether upon her belly, and never holdeth up her head, but the male when he goeth holdeth up his head: their bodies are all set over with black spots, and themselves are thus paraphrastically described by Nicander;

*Unum longa pedem, totoque gracillima trachin,  
Ignea quandoque est, quandoque est candida forma,  
Constritumque satis collam, et tenuissima cauda.  
Blas super gelidos oculos front cornua prefert,*

Which may be Englished in this manner following;  
On foot in length, and slender all along,  
Sometime of fiery hue, sometime milk-white it is,  
The neck bound in, and taylor most thin and strong,  
Whose fore-head hath two horns above cold eyes:

*Splendentem quadam radiorem alientia lux,  
Silvestres ut aper, popularisq; Lucæ:  
Insulpet horribile ac asprum caput baræ.*

Which in their light resemble shining beaver,  
Like Bees full wild, or Locusts flyer bred,  
But yet to look upon all horrible in seem,  
For why? the cruel Bore they show in head.

They keep in rocks, and stony places of the houses and earth, making their dens winding and hanging, according to these Verses;

*Rimosas colit illa Petras, sibi que aspera tecta,  
Et molles pendens facit, instæque cubile.*

In English thus;  
The chinks of Rocks and passages in stone  
They dwell, wherein their lodgings bare,  
A little hanging made for every one,  
And bending to their sleepy harbours are.

It is said that Cynobus the Governour of Meneleus, chanced to fall upon this Serpent, in revenge whereof Helen his charge, the wife of Menelaus broke his back-bone, and that ever since that time they creep lamely, and as it were without loyns; which fable is excellently thus described by Nicander;

*Quondam animosa Helenæ cygni Jovis inchoita proles  
Eversâ rediens Troia (nisi vana vultus)  
Hinc indignata est generi, Phœrias ut ad aras  
Venit, & adversis declinans flamina venit,  
Furibragam statuit juxta Nilis ostia classem.  
Namque ubi navem serpsit, fessum fortis Canobus  
Sternere, et bibulis suis dormientes arenis:  
Lesa venenosæ Hemorrhœis impulsit idem,*

Which may be Englished thus;  
Once noble Helen, Joves child by Swan-like shape,  
Returning back from Troy, destroyed by Grecian war,  
(If that our ancients do not with fables us betray)  
This race was envied by Phœrias anger farre,  
When to his shores for safety they did come,  
Deviling rage of blustering windy sea,  
Water-biding Navy at Nilus mouth gan run,  
Where Canobus all tyred, (slandred for some ease):  
For there this Pest, or Master of the Fleet,  
Did haile from boat to steep in dreary sand,

*Illatamque tultis letali dense quietem:  
Protinus cuipæ cernens id filia Leda,  
Oppressæ medium serpenti servida dorsum  
Infregit, tritaque excussit vincula spinæ,  
Quæ fragili illius sic dempta è corpore fragili  
Et graciles Hemorrhœis, obliquaque Cerasæ  
Ex hoc clauda trahunt jam soli tempore membra.*

Where he did feel the teeth of Hemorrhœus deep,  
Wounding his body with poison, death's own head,  
But when eggs-breeding Leda's womb shed  
This harm, she prest the Serpents back with pin,  
Wherby the bands thereof were all unbind,  
Which in just wrath for just revenge he took.  
So ever since out of this Serpent's frame  
And body they are taken, which is the cause  
That Cerasæ and lean Hemorrhœus are ever known,  
Drawing their parts on earth by nature's law.

They which are stung with these Hemorrhœs, do suffer very intolerable torments, for out of the wound continually floweth blood, and the excrements also that cometh out of the belly are bloody, or sometimes little rouls of blood in stead of excrements. The colour of the place bitten is black,

or of a dead bloody colour, out of which nothing floweth at the beginning but a certain watery humour, then followeth pain in the stomach, and difficulty of breathing. Lastly, the powers of the body are broken, and opened, so that out of the mouth, gums, ears, eyes, fingers ends, nails of the feet, and privy parts, continually issueth blood, until a cramp also come, and then followeth death, as we read in Lucan of one Tullus a young noble man, slain by this Serpent, described as followeth;

*Impressit dentes Hemorrhœis aspera Tullus  
Maganimo juveni, mbratorique Catonis:  
Uique salet pariter totis se confundere signis  
Cunctis pressura cruci: sic omnia membra  
Emisere simul rutilum pro sanguine vitæ.*

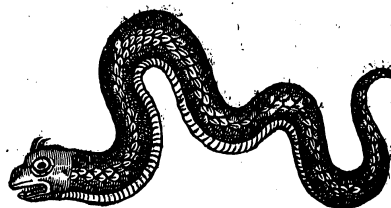
In English thus;  
The Hemorrhœe fierce, in noble Tullus fastened teeth  
That valiant youth, great Catoes scolar deer:  
And as when Saffron by Corycians sheeth  
I prest, and in his colour on them all appear:  
So all his parts sent forth a posson red

*Sanguis erat lachryma: quæcumque foramina novis  
Humor, ab his largus manat cruor, ora redundant,  
Et patula nares, sudor rubet, omnia plenis  
Membra fluunt venis: totum est pro vulnere corpus.*

In stead of blood: Nay all in blood went round,  
Blood was his tears, all passages of it were sped,  
For out of mouth and ears did blood abound,  
Blood was his sweat, each part his vein out-bleeds,  
And all the body blood that one wound feed.

The cure of this Serpent, in the opinion of the Ancients, was thought impossible, as writeth Dioscorides; and thereof they complain very much, using only common remedies, as scarification, actions, sharp meats, and such things as are already remembered in the cure of the Dipsas. But besides these they use Vine-leaves, first bruised and then sod with Honey: they take also the head of this Serpent and burn it to powder, and so drink it, or else Garlick with Oyl of Flower-de-luce; they give them also to eat Reins of the Sun. And besides, they resist the eruption of the blood, with plaisters laid to the place bitten, made of Vine-leaves and Honey, or the leaves of Purflane and Barley-meal. But before their urine turn bloody, let them eat much Garlick stamped, and mixed with Oyl to cause them to vomit, and drink wine delayed with water, then let the wound be washed with cold water, and the bladder continually fomented with hot Spunges. Some do make the cure of it like the cure of the Viper, and they prescribe them to eat hard Egges with Salt fish, and besides, the seed of Radish, the juice of Poppy, with the roots of Lilly, also Daffadie, and Rue, Trefole, Castia, Opoponax, and Cinnamon in potion: and to conclude, the flowers and buds of the bush are very profitable against the biting of the Hemorrhœe, and so I end the history of this Serpent.

### Of the Horned SERPENT.



This Serpent because of his Horns (although it be a kinde of Viper) is called in Greek *Reptaster*, and from thence cometh the Latine word *Cerastes*, and the Arabian *Cerist*, and *Cerastus*. It is called also in Latine, *Ceristalis*, *Cristalis*, *Siralis*, and *Tristalis*. All which are corrupted words, derived from *Ceraster*, or else from one another, and therefore I think it not fit to stand upon them. The Hebrews call it *Schephophim*, the Italians, *Ceraster*, the Germans, *En geburms* (saying) the French, *Un Ceraste*, or *Serpent Cornu*, that is, a horned Serpent; and therefore I have so called it in English, imitating herein both the French and German.

I will not stand about the difference of Authors, whether this Serpent be to be referred to the Asps or to the Vipers, for it is not a point materiall, and therefore I will proceed to the description of his nature, that by his whole history, the Reader may choose whether he will account him a subordinate kinde unto others, or else a principall of himself. It is an African Serpent, bred in the Libyan sandy seas, places not inhabited by men, for the huge Mountains of sands are so often moved by the winds, that it is not only impossible for men to dwell there, but also very dangerous and perilous to travel through them, for that many times whole troops of men and caravels, are in an instant overwhelmed and buried in those sands. And this is a wonderful work

of God, that those places which are least habitable for man, are most of all annoyed with the most dangerous biting Serpents.

It is also said, that once these Horned Serpents departed out of *Lybia* into *Egypt*, where they depopulated all the Country. Their habitation is near the high-ways, in the sands, and under Cart-wheels: and when they goe, they make both a sound with their motion, and also a furrow in the earth, according to the saying of *Nicander*;

*Ex ista alter ecclis velocibus obvia spinis,  
Recto terga tibi prolixum tram te ducit,  
Sed medio diffusum hic ceraspes se corpore voluit:  
Curvum errans per iter, resonantibus aspera squamis.*

Of these the Viper with swift bones thee meets,  
Travelling her back in path direct and strait;  
The Ceraf more diffus'd in way thee greets  
With crooked turning, on soles make sounds full great:

*Qualiter aequoreo longissima gurgite navis,  
Quam violentum agit nunc huc, nunc Africum illuc,  
Pelitur, et laterum gemebunda fragore furum  
Extra iulcandas sinuos fluctibus undas;*

Like as a ship tossed by the Western wind,  
Sounds afarro off; moved now here, now there,  
So that by noise of whirling flutes we find  
His furrowes turned in Seas and water there.

The quantity of this horned Serpent is not great, it exceedeth not two cubits in length; the colour of the body is branded like sand, yet mingled with another pale white colour, as is to be seen in a Hares skin. Upon the head there are two horns, and sometimes four, for which occasion it hath received the name *Ceraspes*, and with these horns they deceive Birds: for when they are hungry, they cover their bodies in sand, and only leave their horns uncovered to move above the earth, which when the Birds see, taking them to be Worms, they light upon them, and so are devoured by the Serpent. The teeth of this Serpent are like the teeth of a Viper, and they stand equal, and not crooked: In stead of a back-bone they have a gristle throughout their body, which maketh them more flexible and apt to bend every way: for indeed they are more flexible than any other Serpent. They have certain red stripes cross the back, like a Crocodile of the earth, and the skins of such as are bred in *Egypt* are very soft, stretching like a Cheverell-glove, both in length and breadth, as it did appear by a certain skin taken off from one being dead; for being stuffed with Hay, it shewed much greater then it was being alive, but in other Countreys the skins are not so.

I have heard this History of three of these Serpents brought out of *Turkey*, and given to a Noble man of *Venice* alive, who preserved them alive in a great Glasse (made of purple) upon find, in that Glasse went the fire: The description as here followeth, was taken by *John Pallour*, an English Traveller, saying They were three in number, whereof one was thrice so big as the other two, and that was a female, and she was said to be their Mother: she had laid at that time in the sands four or five Eggs, about the bignesse of Pigeons Eggs. She was in length three foot, but in breadth or quantity almost so big as a mans Arm: her head was flat, and broad as two fingers, the apple of the eye black, all the other part being white.

Out of her eye-lids grew two horns, but they were short ones, and those were truly Horns, and not flesh. The neck compared with the body was very long and small, all the upper part of the skin was covered with scales, of ash-colour, and yet mixed with black. The tail is at it were born when it was stretched out. And this was the description of the old one: the other two being like to her in all things, except in their horns, for being small, they were not yet grown. Generally, all these horned Serpents have hard dry scales upon their belly, wherewithall they make a noise when they go themselves, and it is thus described by *Nicander*;

*Nunc potes aditum, insidiatorumque Ceraspen  
Noscere, viperarum veluti genus, bulis, quia dispar  
Non in corpus habet, sed quatuor aut duo profert*

*Cornua, cum mutila videatur Viperarum  
Squalidum albeni color est.*

In English thus;  
You well may know the treacher Ceraf's noise,  
A Viper-kinde, whose bodies much agree,  
Yet these four horns and brandy colour, poise,  
Where Viper none, but forehead plain you see.

There is no Serpent except the Viper that can so long endure thirst as this horned Serpent, for they seldom or never drink; and therefore I think they are of a Vipers kinde: for besides this also it is observed, that their young ones do come in and out of their bellies as Vipers doe: They live in hatred with all kinde of Serpents, and especially with Spiders. The *Hawes of Egypt* also do destroy horned Serpents and Scorpions: but about *Thebes* in *Egypt* there are certain sacred Snakes (as they are termed) which have horns on their head, and these are harmlesse unto men and beasts, otherwise all these Serpents are virulent and violent against all creatures; especially men: yet there be certain men in *Lybia* called *Psylli*, which are in a league; or rather in a naturall concord with horned Serpents. For if they be bitten by them at any time, they receive no hurt at all: and besides, if they be brought unto any man that is bitten with one of these Serpents, before the poyson be spread all over his body, they help and cure him, for if they finde him but slightly hurt, they only spit upon the wound, and so mitigate the pain, but if they finde him more deeply hurt,

then they take much water within their teeth, and first wash their own mouth with it, then spit out the water into a pot, and make the sick man to drink it up. Lastly, if the poyson be yet strong, they lay their naked bodies upon the naked poysoned body, and so break the force of the poyson. And this is thus described by the Poet, saying,

*Audivi Lybicos Psyllot, quos aspera Sirtiis  
Serpentumque ferax patria alit populos,  
Non idem insiditum dico, morsuque venenum*

*Ledere: quin lasis ferre & opem reliquit,  
Non vi radicem proprio, sed corpore junctis.*

That is to say,  
The Lybian Psylli, which Serpent-breeding Syrtis dwell  
As I have heard, do cure poyson, stings, and bites,  
Nor hurt themselves, but it in other quell:  
By no roots force, but joyning bodies quies.

When a horned Serpent hath bitten a man or beast, first about the wound there groweth hardness, and then puffsles. Lastly, black, earthy and pale matter: the genital member standeth out straight and never falleth, he falleth mad, his eyes grow dim, and his nerves immanuable, and upon the head of the wound groweth a scab like the head of a Nail, and continually pricking, like the pricking of Needles: And because this Serpent is immoderately dry, therefore the poyson is most pernicious; for if it be not holpen within nine dayes, the patient cannot escape death. The cure must be first by cutting away the flesh unto the bone, where the wound is, or else the whole member if it can be, then lay upon the wound Goats dung sod with Vinegar or Garlike, and Vinegar or Barley-meal, or the juice of Cedar, Rue, or Nep, with Salt and Honey, or Pitch and Barley-meal, and such-like things outwardly: inwardly Daffadil and Rue in drink, Radish-seed, Indian Cummin, with wine and Castoreum, and also Calamint, and every thing that procureth vomit. And thus much for the description of the Horned Serpent.

#### Of the HYENA.

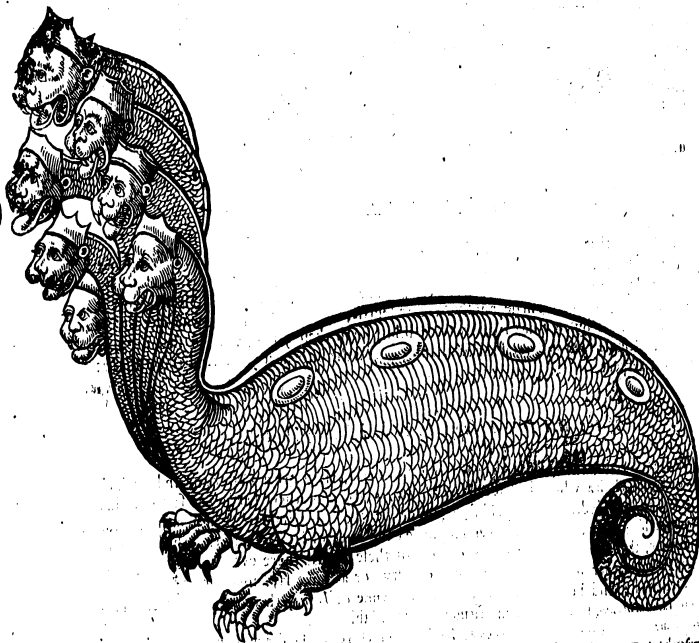
Here be some that make question whether there be any such Serpent as this or no, for it is not very like that there is any such, and that this Hyena is the self same which is described to be a Four-footed Beast, for that which is said of that, is likewise attributed to this: namely, that it changeth sex, being one year a male, another year a female, and that the couples which seem to be married together, do by continuall entercourse, bring forth their young ones, so that the male this year is the female next year, and the female this year is the male next year. And this is all that is said of this Serpent.

#### Of the HYDRA, supposed to be killed by Hercules.

The Poets do say, that near to the Fountain *Amymna*, there grew a Plantain, under which was bred a Hydra which had seven heads: whereof one of these heads was said to be immortal: with this Hydra *Hercules* did fight; for there was in that immortal head such a poyson as was uncurable; wherewithall *Hercules* moyntened the head of his Darts after he had killed it: and they say, that while *Hercules* struck off one of these heads, there ever arose two or three more in the room thereof, untill the number of fifty, or as some say, fourscore and ten heads were stricken off: and because this was done in the fenne of *Lerna*, therefore there grew a Proverb of *Lerna* malorum, to signifie a multitude of unresistible evils.

And some ignorant men of late dayes at *Venice*, did picture this Hydra with wonderfull Art, and set it forth to the people to be seen; as though it had been a true carcase, with this inscription. In the year of Christs incarnation, 550. about the month of *January*, this monstrous Serpent was brought out of *Turkey* to *Venice*, and afterwards given to the French King: it was esteemed to be worth 6000. Ducats. These Monsters signify the mutation or change of worldly affairs, but I trust said the Author of the inscription, who seemed to be a German) the whole Christian World is so afflicted that there is no more evil that can happen to the Christian World, except destruction; and therefore I hope that these Monsters do not foreshew any evil to the Christians. Therefore seeing the Turkish Empire is grown to that height, in which estate all other former Kingdomes fell, I may divine and prophesie that the danger threatned hereby, belongeth to the *Turky*, and not unto us, in whose Government this Monster was found to be bred: and the hinder part of his head seemeth to resemble a *Turky* Cap. Thus far this inscribing Diviner. But this fellow ought first of all to have enquired about the truth of this Picture, whether it were sincere or counterfeit, before he had given his judgement upon it: For that there should be such a Serpent with seven heads, I think it impossible, and no more to be beleevd and credited, then that *Castor* and *Pollux* were conceived in an Egge, or that *Pluto* is the GOD of Hell, or that armed men were created out of Dragons teeth, or that *Vulcan* made *Achilles* his Armour, or that *Venus* was wounded by *Diomedes*; or that *Ulysses* was carryed in Bottles, so true I think is the shape of this Monster: for

the head, ears, tongue, nose, and face of this Monster, do altogether degenerate from all kinds of Serpents, which is not usual in Monsters, but the fore-parts do at most times resemble the kind to which it belongeth; and therefore if it had not been an unskilfull Painters device, he might have framed it in a better fashion, and more credible to the world. But let it be as it is, how doth he know that this evil doth more belong to the *Turks* than to the Christians? For shall we be so blinde and flatter our selves so far, as not to acknowledge our sins, but to lay all the tokens of judgement upon our adversaries? But if there appeared in us any repentance or amendment of those faults, for which God hath suffered in his justice, that impious Tyrant and Tyrannicall Government to prevail against Christians, then we might think that GOD would look mercifully upon us, and avert his wrath from us upon our enemies. But with sorrow and grief be it spoken, all the Kings and people of *Christendome*, do directly go forward without stumbling in those vile courses, and odious crying sins, for which God hath set up the *Turks* against former ages, and therefore we have no cause to hope that ever this rod shall be cast into the fire, untill the chastisement of Gods children have procured their amendment, and if no amendment, then all the powers of heaven (the blessed Trinity excepted) cannot keep *Christendome* from ruine and destruction, which God of his infinite mercy turn away from us.



To turn again to the story of the Hydra, I have also heard, that in *Perice* in the Duke's treasury among the rare Monuments of that City, there is preserved a Serpent with seven heads, which if it be true, it is the more probable that there is a Hydra, and then the Poets were not altogether deceived, that say, *Hercules* killed such a one. This Hydra which *Hercules* slew, they say was engendered betwix that say, *Hercules* killed such a one. This Hydra which *Hercules* slew, they say was engendered betwix *Echidna* and *Typhon*, and nourished by *Typhon* in *Lerna*, in hatred of *Hercules*; and they say further, that when he came to kill it, there came a Crab or Cancer to help the Hydra against *Hercules*, who instantly called upon *Iolaus* for help, and so *Iolaus* slew the Crab, and *Hercules* the Hydra.

*Phaedrus* maketh the story of *Hercules* by killing the Hydra, to be a meer allegory, saying, that the Hydra was a Castle kept by fifty men, the King whereof was called *Lerna*, who was assisted by a Noble man (called *Cancer*) against the assaults of *Hercules*, and that *Hercules* by the help of his, King of the *Ihebones*, overcame that King and Castle. Other say that *Lerna* and *Hydra* signify the two kinds of Envy, distinguished by *Invidia*, and *Invidentia*, in himself, which arise out of the most strow filthy fenne of humane corruption; like a monstrous hideous Dragon, with whom he strove, and as he struck off one head or temptation, so two, or three other continually arose in the room thereof. And thus much for the Hydra, whether it be true or fabulous.

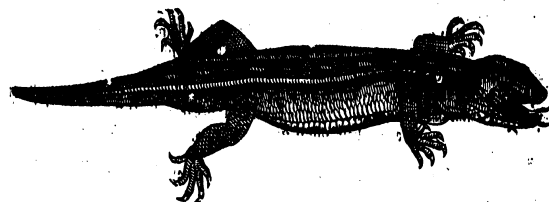
## Of innocent SERPENTS.

I Doe read of two kinds of innocent Serpents, one called *Lysier*, because they are only in *Affrick*; and never do hurt unto men, and therefore *Nugler* was deceived, which maketh this kind of Serpent to be the same with the *Amidyle*, whose sting or teeth are very mortal and deadly. There be also other kinds of harmless Serpents, as that called *Molur*, *Mulaca*, and *Mylaris*, which is said to go upon the tail, and it hath no notable property, except that one thing which giveth it the name, for *Molur* is derived from *Molu* *Orin*, that is hardly making water.

There be also domesticall innocent Serpents, *Mysmus*, *Ophiola*, and *patibum*, which whether they be one kind or many, I will not stand upon, for they are all termed by the *German*, *Huffjuck*, and *Huffjuck*, that is, a House-snake. They live by hunting of Mice, and Weasels, and upon their heads they have two little ears, like to the ears of a Mouse, and because they be as black as coals, the *Julians* call them *Serpe nero*, and *Carbon*, and *Garabonazo*, and the *French-men*, *Anguille de Hay*, that is, a Snake of hedges. There be some that nourish them in Glasses with branne, and when they are at liberty they live in Dung-hills also, wherein they breed sometimes, they have been seen to suck a Cow, for then they twill their tails about the Cowes legs. *Matthiolus* writeth, that the flesh of this Snake, when the head, tail, entrails, fat, and gall are cut off and cast away, to be a special remedy against the French-pox.

There are also other kinds of Innocent Serpents, as that called *Parea*, and in *Italy* *Baron*, and *Pagerina*, which are brought out of the East, where these are bred. There be no other harmful Serpents in that Countrey. They are of a yellow colour like Gold, and about four spans long: upon either side they have two lines or strokes, which begin about a hand breadth from their neck, and end at their tail. They are without poison as may appear by the report of *Gessner*, for he did see a man hold the head alive in his hand. And thus much shall suffice to have spoken of Innocent Serpents.

## Of the LIZARD.



Although there be many kinds of Lizards, yet in this place I will intreat first of the vulgar Lizard, called in the Hebrew *Leisab*, *Langermisha*, *Lyseria*, *Carbo*, *Pelipab*, and *Egole*; the *Chaldeans*, *Habibi*, and *Humera*; the *Arabs*, *Aulis*, *Albabit*, or *Albadit*, *Hadun*, *Arab*, *Sambor*, *Sagmura*; the *Greeks* in ancient time *Sauris*, and *Sauca*, and vulgarly at this day *Kalsaura*; the *Italians* in some places, *Liguro*, *Leguro*, *Locerta*, and *Lucertula*; about *Trem*, *Racani*, and *Ramarri*, and yet *Ramarri* also used for a Toad; the *Spaniards*, *Lagarto*, *Laerta*, *Lagarilla*, and *Lagarina*; the *French*, *Lizarde*; the *German*, *Adax*, and when they distinguish the male from the female, they express the male, *Ein Egcher*, and the female, *Egler*; in *Hesse*, *Lydelsch*; in *Flanders* and *Wirtia*, *Gelberky*, and *Gessner*; the *Latines*, *Laertus*, and *Laertia*, because it hath arms, and shoulders like a man, and for this cause also the Salamander, the Scellion, the Crocodile, and Scorpions are, also called sometimes *Laerti* Lizards. And thus much shall suffice for the name.

The vulgar Lizard is described on this sort; the skin is hard and full of scales, according to this lying of *Vitruvius*:

Alsum & pith squalemta, terga Lepert.

In English thus;

Those put away

and pointed Lizards, with their scaly backs.

The colour of it is pale, and distinguished with certain rusty spots, as *Pliny* writeth, with long strokes or lines to the tail; but generally they are of many colours, but the green with the white belly living in bushes, hedges, and is the most beautiful, and most respected; and of this we shall peculiarly intreat hereafter. There have been some Lizards, taken in the beginning of *September*, whose



their teeth very hurtful where they fasten them. Like unto these are certain others bred in *Hymalaia*, in an Island called *Hymalaia*, having prickles on their back, and a comb on their head, but without voice having four feet, and a tail like Lizards, with very sharp teeth. They are not much greater than Hares or Conies, yet they live indifferently in trees, and on the earth, being very patient, and enduring famine many days. Their skin smooth and speckled like a Serpent, and they have a crap on the belly from the chin to the breast, like the crap of a Bird.

Besides these, there are also some called *Babui*, about the bignesse of Conies, and of a white ash colour, yet their skin and tail like a Snakes, and they resemble trapped Horses. They have four feet, and with the foremost they dig them holes in the earth, out of which they are drawn again like Conies to be eaten of men, for they have a pleasant tail. To conclude, we do read that in the year 1543. there came many winged Serpents and Lizards into *Germany*, near *Syria*, and did bite many mortally: And in the year 1551. there were such bred in the bodies of men and women, as we have shewed already in the general discourse of Serpents, first of all recited in the beginning.

In all the nature of Lizards, there is nothing more admirable then that which is reported of them by *Alianus* of his own knowledge. When a certain man had taken a great fat Lizard, he did put out her eyes with an Instrument of Brasse, and so put her into a new earthen pot, which had in it two small holes or passages, big enough to take breath at, but too little to creep out at, and with her moist earth and a certain herb, the name whereof he doth not expresse: and furthermore, he took an Iron Ring, wherein was set an *Engadani* Stone, with the Picture of a Lizard engraven upon it. And besides, upon the Ring he made nine several marks, whereof he put out every day one, until at the last he came at the ninth, and then he opened the pot again, and the Lizard did see as perfectly as ever he did before the eyes were put out: whereof *Albertus* enquiring the reason, could give none, but having read in *Isidorus*, that when the Lizards grow old and their sight dim or thick, then they enter into some narrow hole of a Wall, and so set their heads therein, directly looking towards the East or Sun-rising, and so they recover their sight again. Of this *Albertus* giveth good reason, because he saith, the occasion of their blindness cometh from frigiditie congealing the humor in their eyes, which is afterward attenuated and dissolved by the help and heat of the Sun. The voice of the Lizard is like the voice of other Serpents, and if it happen that any man by chance do cut the body of the Lizard asunder, so as one part falleth from another, yet neither part dyeth, but goeth away the upon two legs that are left, and live apart for a little season, and if it happen that they meet again, they are so firmly and naturally conjoynd by the secret operation of nature, as if they had never been severed, only the scar remaineth.

They live in caves of the earth, and in graves, and the green Lizards in the fields and Gardens, but the yellowish or earthy brown Lizard among hedges and thorns. They devour any thing that comes to their mouth, especially Bees, Emets, Palmer-worms, Grasshoppers, Locusts, and such like things, and four months of the year they lie in the earth and eat nothing.

In the beginning of the year about *March*, they come out again of their holes, and give themselves to generation, which they perform by joyning their bellies together, wreathing their tails together, and other parts of their bodies; afterwards the female bringeth forth Eggs, which she committeth to the earth, never sitting upon them, but forgetteth in what place they were laid (for she hath no memory.) The young ones are conceived of themselves, by the help of the Sun. Some there be which affirm, that the old one devoureth the young ones as soon as they be hatched, except one which she suffereth to live, and this one is the basest and most dullard, having in it least spirit of life the residue: yet notwithstanding, afterwards it devoureth both his parents, which thing is proved false by *Albertus*, for seeing they want memory to finde out their own Eggs, it is not likely that they have so much understanding as to discern their own young ones, nor yet so unnatural as to devour the noblest of their brood, but rather they should imitate the Crocodile, which killeth the basest and spareth the best spirits.

It is affirmed, that they live but half a year or six months, but it is also false, for they hide themselves the four coldest months; and therefore it is likely that they live more then six, for else what time should they have for generation? Twice a year they change their skin, that is in the Spring and Autumn, like other Serpents that have a soft skin, and not hard like the Tortoise. Their place of conception and emission of their Eggs is like to Birds: and therefore it is a needlesse question to enquire whether they bring eggs forth of their mouth or not, as some have foolishly affirmed, but without all warrant of truth or nature.

They live by couples together, and when one of them is taken, the other waxeth mad, and regeth upon him that took it, whether it be male or female: In the Old Testament Lizards, Weasels, and Mice are accounted impure beasts, and therefore forbidden to be eaten, not only because they live in Graves and design inconstancy of life, but also because they are treacherous persons. They are afraid of every noise, they are enemies to Bees, for they live upon them; and therefore in ancient time they mixed Meal and juyce of Mallows together, and laid the same before the Hives, to drive away Lizards and Crocodiles. They fight with all kinde of Serpents; also they devour Snails, and contend with Toads and Scorpions. The Night-owls and Spiders do destroy the little Lizards, for the Spider doth so long wind her thred about the jaws of the Lizard, that he is not able to open his mouth, and then she fasteneth her fangs in her brains. The Storks are also enemies to Lizards, according to this saying of the Poet;

—Se.

—Serpente ciconia pullos  
Nutrit & inventa per devitura lacerta.

In English thus;

With Lizards young and Serpents breed,  
The Stork, seeketh her young ones to feed.

Notwithstanding, that by the law of God, men were forbidden to eat the Lizard, yet the *Troglodytes*, *Ethiopiens*, did eat Serpents and Lizards, and the *Amazon* did eat Lizards and Tortoises, for indeed those women did use a very thin and slender diet; and therefore *Calius* doth probably conjecture, that they were called *Amazon*, because *Maxia caribani*, that is, they wanted all manner of delicate fare. We have also shewed already, that the Inhabitants of *Diofcorides* Isle, do eat the flesh of Lizards, and the fat after it is boyled, they use in stead of Oyl.

Concerning the venom or poyson of Lizards. I have not much to say, because there is not much thereof written: yet they are to be reproved which deny they have any poyson at all, for it is manifest that the flesh of Lizards eaten, (I mean of such Lizards as are in *Italy*.) do cause an inflammation and apostumation, the heat of the head-ach, and blindness of the eyes. And the Eggs of Lizards do kill speedily, except there come a remedy from Faulkons dung and pure Wine. Also when the Lizard biteth, he leaveth his teeth in the place, which continually aketh, until the teeth be taken out: the cure of which wound is first to suck the place, then to put into it cold water, and afterward to make a plaister of Oyl and Ashes, and apply the same thereunto. And thus much for the natural description of the Lizard.

The medicines arising out of the Lizard, are the same which are in the Crocodile, and the flesh thereof is very hot: wherefore it hath vertue to make fat, for if the fat of a Lizard be mixed with Wheat-meal, Halimire, and Cumin, it maketh Hens very fat, and they that eat them much fatter: for *Gordan* saith, that their bellies will break with fatnesse, and the same given unto Hawks, maketh them to change their feathers.

A Lizard dissected, or the head thereof being very well beaten with Salt, draweth out Iron points of nails, and splents out of the flesh or body of man, if it be well applyed thereunto, and it is also said, that if it be mingled with Oyl, it causeth hair to grow again upon the head of a man, where an Ulcer made it fall off. Likewise a Lizard cut asunder hot, and so applied, cureth the stinging of Scorpions, and taketh away Wens.

In ancient time with a Field-lizard dried and cut asunder, and so bruised in pieces, they did draw out teeth without pain; and with one of these fod and stamped, and applied with Meal or Frankincense to the fore-head, did cure the watering of the eyes.

The same burned to powder, and mixed with Cretick Honey by an Ointment, cureth blindness. The Oyl of a Lizard put into the ear, helpeth deafnesse, and driveth out Worms if there be any therein. If children be anointed with the blood fasting, it keepeth them from swellings in the belly and legs: also the liver and blood lapped up in Wool, draweth out nails and thorns from the flesh, and cureth all kinde of freckles, according to this verse of *Serenus*;

Verrucam poterit largus cypre Lacerta.

That is to say;

The blood of Lizards can,

Cure freckles in a man.

The urine (if there be any at all) helpeth the Rupture in Infants. The bones taken out of the Lizards head in the full Moon, do scarifie the teeth, and the brain is profitable for suffusions: The liver laid to the gums, or to hollow teeth, easeth all pain in them. The dung purgeth wounds, and also taketh away the whitenesse and itching of the eyes, and so sharpeneth the sight, and the same with water, is used for a salve. *Arnoldus* doth much commend the dung of Lizards mixed with Meal, the black thereof being cast away, and so dried in a furnace, and softened again with water of Nitre, and froth of the Sea, afterwards applyed to the eyes in a cloth, is very profitable against all the former evils. And thus much shall suffice to have spoken of the first and vulgar kinde of Lizard: for killing of whom *Apollo* was in ancient time called *Sauronotus*.

### Of the GREEN LIZARD.

The greater Lizard which is called *Lacerta Viridis*, the green Lizard, by the *Grecians*, *Cheliosaurus*; by the *Italians*, *Gex*; and by the *German*, *Gruner Heyd-w*, is the same which is called *Ophiomachus*, because it fighteth with Serpents in the defence of man. They are of colour green, from whence they are named, and yet sometimes in the Summer they are also found pale. They are twice so big as the former Lizard, and come not near houses, but keep in Meadows and green fields. They only abound in *Italy*, and it is a beast very loving and friendly unto man, and an enemy to all other Serpents. For if at any time they see a man, they instantly gather about him, and laying their heads at one side, with great admiration behold his face: and if it chance a man do spit, they lick up the spittle



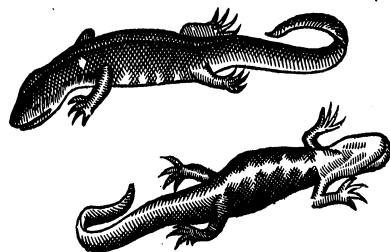


the writh. In the heat of Summer they get themselves to, the Mountain, and there seize upon cattle of all sorts, as often as anger or wrath enforceth them.

The nature of it is very hot, and therefore venomous in the second degree: wherefore when it hath bitten any, there followeth putrefaction and rottenesse, as flesh where water lyeth betwixt the skin, like as in the Dropfie: for besides, the common affections it hath with the Viper, and the biting thereof, alike in all things, more deadly and unresistible evils followeth, as drouzy, sleepinesse, and Lethargy, and pain in the belly, especially the Colick, pain in the liver and stomach, killing within two days, if remedy be not provided.

The cure is like the cure of the Vipers biting, Take the seed of Lettice, and Flax-seed, Savory beaten or stamped, and wilde Rue, wilde Betony, and Daffadil two drams in three cups of Wine, and drink the same, immediately after the drinking hereof, drink also two drams of the root of Centaury, or Hartwort, Nofewort, or Gentian, or Selamjine. And thus much for a description of this venomous Serpent, one of the greatest plagues to man and beast in all those Countries or places, where in it is ingendered, and it is not the least part of English happinesse to be freed by God and Nature from such noysome, virulent and dangerous neighbours.

#### Of the NEVTE or WATER-LIZARD.



This is a little black Lizard, called *Wassermoll*, & *Wasserschilder*, that is a Lizard of the Water. In French, *Tafot*; and in Italian *Marafandola*, which word is derived from *Marasso*, a Viper, because the poyson hereof is like the poyson of Vipers, and in the Greek it may be termed *Enudros Soma*. They live in standing waters or pools, as in ditches of Towns and Hedges. The colour as we have said is black, and the length about two fingers, or scarce so long. Under the belly it is white, or at least hath some white small spots on the sides and belly: yet sometimes there are of them that are of a dusky earthy colour, and towards the tail yellowish. The skin is strong and hard, so as a knife can scarce cut the same, and being cut, there issueth out a kinde of white matter li- quor, like as in Salamanders.

Being taken, it shutteth the mouth so hard as it cannot be easily opened, neither doth it endeavour to bite, although it be plucked and provoked. The tongue is very short and broad, and the teeth so short and small, as they are scarcely visible within the lips. Upon the fore-feet it hath four fingers or claws, but upon the hinder-feet it hath five. The tail standeth out betwixt the hinder-legs in the middle, like the figure of a wheel-whirl, or rather so contracted, as if many of them were conjoynd together, and the void or empty places in the conjunctions were filled. The tail being cut off, liveth longer then the body, as may be seen in every days experience, that is; by motion giving longer signes and token of life.

This Serpent is bred in fat waters and soils, and sometimes in the ruines of old walls, especially they delight in white muddy waters, hiding themselves under stones in the same water if there be any, and if not, then under the banks side of the earth, for they seldom come to the land. They swim underneath the water, and are rarely seen at the top. Their eggs are not past so big as peas, and they are found hanging together in clusters. One of these being put alive into a glasse of water, did continually hold his head above the water like as Frogs do, so that thereby it may be conjectured it doth often need respiration, and keepeth not under water except in fear, and seeking after meat.

There is nothing in nature that so much offendeth it as Salt, for so soon as it is laid upon Salt, it endeavoureth with all might and main to run away, for it biterh and stingeth the little beast above measure, so that it dyeth sooner by lying in Salt where it cannot avoid, then it would by suffering many stripes, for being beaten it liveth long, and dyeth very hardly. It doth not like to be without water, for if you try one of them, and keep it out of water but one day, it will be found to be much the worse.

Being moved to anger, it standeth upon the hinder-legs, and looketh directly in the face of him that hath stirred it, & so continueth till all the body be white, through a kind of white humor or poyson, that it swelleth outward, to harm (if it were possible) the person that did provoke it. And by this is their venomous nature observed to be like the Salamander, although their continual abode in the water, maketh their poyson the more weak.

Some say that if in France a Hog do eat one of these, he dyeth thereof, and yet doth more safely eat the Salamander. But in England it is otherwise, for I have seen a Hog without all harm carry in his mouth a Newt, and afterward eat it. There be some Apothecaries which do use this Newt in

head

Head of Skinks or Crocodiles of the earth, but they are deceived in the virtues and operation, and do also deceive others, for there is not in it any such wholesome properties, and therefore not to be applied without singular danger. And thus much may suffice to be said for this little Serpent, or Water-creeping creature.

#### Of the PELIAS.

Although making mention of the *Elops* and *Pelias*, two kinds of Serpents, doth joyntly speak of them in this sort, saying that the signes of these Serpents were so common and vulgarly known, that there was no descriptions of them among the ancient Writers. But the Pelias biting causeth putrefaction about the wound or bitten place, but yet not very dangerous, and it bringeth obscurtion or dimnesse to the eyes, by reason that as the poyson is universally distributed over all the body, so it hath most power over the tenderest part, namely the eyes. It is cured by a Potion with Oyl in drink, and a decoction of such Dockes as grow in ditches, and other simple medicines, such as are applied to the curing of the Yellow-jaundise. The eyes must be washed with the urine of a child or young man which never knew any woman carnally, and this may be applied either simply and alone, or else by Brine and Pickle, so also must the head. After that the body is purged, anoint it with Balsamum and Honey, and take an Eye-salve to sharpen again and recover the sight, and for this cause it is very good to weep, for by evacuation of tears, the venom also will be expelled. But if the eyes grow to pain, then let their Eye-salve be made more temperate and gentle, to keep the head and brain from stupefaction. And thus much for the Pelias out of Asia.

#### Of the PORPHYRE.

There is among the *Indians* a Serpent about the bignesse of a span or more, which in outward aspect is like to the most beautiful and well coloured Purple, the head hereof is exceeding white, and it wanteth teeth. This Serpent is sought for in the highest Mountains, for out of him they take the Sardius stone. And although he cannot bite because he wanteth teeth, yet in his rage when he is persecuted, he casteth forth a certain poyson by vomit, which causeth putrefaction where ever it lighteth. But if it be taken alive and be hanged up by the tail, it rendereth a double, one while it is alive, the other when it is dead, both of them black in colour, but the first resembleth black Amber. And if a man take but so much of the first black venom as is the quantity of a Sesame seed, it killeth him presently, making his brains to fall out at his nostrils, but the other worketh neither so speedily, nor after the same manner: for it catcheth one into a Consumption, and killeth within the compasse of a year. But I finde *Helianus*, *Volateran*, and *Textor* to differ from this relation of *Ctesias*, for they say, that the first poyson is like to the drops of Almond trees, which are congealed into a gum, and the other which cometh from it when he is dead, is like to thin mattery water. Unto this Porphyre I may add the Palmer Serpent, which *Strabo* writeth doth kill with an unrecoverable poyson, and it is also of a Scarlet colour, to the joyne or hinder parts.

#### Of the PRESTER.

Although there be many Writers which confound together the Prester & the Dipsas, and make of them but one kinde, or Serpent of divers names, yet seeing on the contrary there be as many or more which do distinguish or divide them, and make them two in nature different, one from another, the Dipsas killing by thirst, and the Prester by heat, as their very names do signifie, therefore I will also trace the steps of this latter opinion, as of that which is more probable and consonant to truth.

The *Grecians* call it *Prester* of *Pretibin*, which signifieth to burn or inflame, and *Tremellus* and *Junius* think, that the Serpents called fiery Serpents, which did sting the *Israelites* in the Wilderness, were Presters. We finde in *Suidas*, *Prester* for the fire of Heaven, or for a cloud of fire carried about with a vehement strong wind, and sometimes lightnings. And it seemeth that this is indeed a fiery kinde of Serpent, for he himself always goeth about with open mouth, panting and breathing as the Poet writeth;

*Oraque distendens avidus summa Prester,*  
*Inscit, ut laesum tumida membra gerat.*

Which may be Englished thus;

*The greedy Presters wide open forming mouth*  
*Inscit, and swelleth, making the members by heat unmov'd.*

When this Serpent hath struck or wounded, there followeth an immeasurable swelling, distension, conversion of the blood to matter, and corrupt inflammation taking away freedom or easinesse

of aspiration, likewise dimming the sight, or making the hair to fall off from the head; at last his fotation as it were by fire, which is thus described by *Manian* upon the person of *Sanctus*, in- ing as followeth:

*Ecce subit facies leto diversa fluenti.  
Narsidum Marfi cultorem torridum agri  
Perocisti preter: illi rubor igneus ora  
Succendit, tenditq; cutem pereuntis figura,  
Miseris omnia tumor tota jam corpore mis-  
Humumq; agrosq; modum sajor omnia membra  
Efflatur Saries, laetis tollente veneno.  
Iste late penitus angustis corpore meris.*

*Nec lorica tenes distenti corporis aulam.  
Spumens accenso non sis exundat abeno  
Videtur cumulus: nec tanto carbasa Cora  
Curavere sinas: tumidus jam non capit atus  
Informis globus & confuso pendere paratum.  
Miserum voluisti rostris, epulasq; liturum  
Pleud impune feris, non ausi trahere basia,  
Mandam stante modo crelesci fuger cadaver.*

Which may be thus Englished;

Lo suddenly a divers fate the joyful current stayed,  
Narsidus, whilom Marsius torrid did adore;  
By burning sting of scorching Prester dead was layd;  
For fiery colour his face enflam'd, not at best;  
The first appearing visage fall'd, all was out-stretcht,  
Swelling cover'd all, and bodies grosse doubled  
Surpassing burnit bounds and members all ore reacht,  
Aspiring venom spread matter blown in carcases troubled.  
The man lyeth drownd within swollen bodies banks,  
No girdle can his monstrous growth contain.  
Not so are waters swollen with rage of sandy flanks,  
Nor sails bend down to blustering Corus main.  
Now can it not the swelling shew keep in hold,  
Deformed globe it is, and trunk ore-come with weight,  
Unscot of flying Fowle, no beaks of young or old  
Do him dare set aker breast full wilde upon the body bait,  
But that they die: No man to bury in earth or fire,  
Durst once come nigh, nor stand to look upon that hapless case,  
For never could the heat of corpe, though dead to smell,  
Therefore afraid they ran away with speedy pace.

The cure of the poyson of this Serpent, is by the Physicians found out to be wilde Purflin, also the flowers and stalk of the bush, the Beavers stone called *Castoreum*, drunk with *Opoponax* and Rew in Wine, and the little Sprat-fish in dew: And thus much of this fire-burning venomous Serpent.

### Of the RED SERPENT.



This kinde of Serpent being a Serpent of the Sea, was first of all found out by *Pellerius* Bishop of *Mompalino*, as *Rondelatus* writeth, and although some have taken the same for the *Myxus* or *Bur*, of which we have spoken already, yet is it manifest that they are deceived, for it hath gills covered with a bony covering, and also fins to swim withal, much greater then those of the *Myxus*, which we have shew'd already to be the male Lamprey. This Serpent therefore for the outward part, proportion thereof, is like to the Serpents of the land; but of a red or purplish colour, being full of crooked or oblique lines, descending from the back to the belly, and dividing or breaking that long line of the back, which beginneth at the head, and so stretcheth forth to the tail.

The opening of his mouth is not very great, his teeth are very sharp and like a saw, his gills like scaly-fishes, and upon the ridge of his back, all along to the tail, and underneath upon the rine or brim of his belly are certain hairs growing, or at the least thin small things like hairs, the tail being shut up in one undivided fine. Of this kind no doubt are those which *Belonius* saith he saw by the lake *Abydur*, which live in the waters, and come not to the land but for sleep, for he affirmeth that they are like land Serpents, but in their colour they are red spotted, with some small and dusky spots. *Gillius* also saith, that among the multitude of Sea Serpents, some are like Congers, and I cannot tell whether that of *Virgil* be of this kinde or not, spoken of by *Laocoon* the Priest of *Nepheus*.

*Solennes taurum ingentem mallebat adunas.  
Eccae autem gemini a Teleda exanquillo per alta  
(Horrore referent) immensis orbibus angues  
Incumbunt pægo: pariterq; adlitura tendunt.*

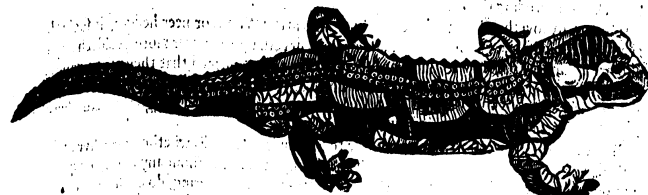
*Pellora quorundam inter fluctus arrecta, jubaeque  
Sanguinea corporeas undas: pars cætera pontum  
Pons legit, sinuatque immensis voluminibus terga.  
Est scilicet formæ salo, &c.*

Which

Which may be Englished thus;

*Which was a Bull at Athens solemn sacrifice,  
Beasts (I fear to tell) two monstrous Snakes appeared,  
Out of Tenedos shore both calm and deep did rise  
One puts in Sea, the other on Land was reared:  
Till the deep-sea and red blood mares on waters mounted,  
But back and call on Land from flaming Sea thus founded.*

### Of the SALAMANDER.



I Will not contrary their opinion which reckon the Salamander among the kinds of Lizards; but leave the assertion as somewhat tolerable: yet they are not to be followed, or to be believed, which would make it a kinde of Worm; for there is not in that opinion either reason or resemblance. What this Beast is called, among the Hebrews I cannot learn, and therefore I judge that the Jews, (like many other Nations) did not acknowledge that there was any such kinde of creature, for ignorance bringeth infidelity in strange things and propositions.

The Greeks call it *Salamandra*, which word or term is retained almost in all languages, especially in the Latine, and therefore *Isidore* had more boldness and wit, then reason, to derive the *Latine Salamandra*, quasi *Vulcanandrem*, resisting burning, for being a Greek word, it needeth not a *Latine* notation. The Arabians call it *Sambra*, and *Sambra*, which may well be thought to be derived or rather corrupted, from the former word *Salamandra*, or else from the Hebrew word *Semalit*, which signifieth a Stellion. Among the Italians and Rhetians it retaineth the *Latine* word; and sometimes in Rhetia it is called *Rafida*. In the Dukedom of Savoy, *Pluvina*. In France, *Sourd*, *Blande*, *Albreme*, and *Arfadre*, according to the divers Provinces in that Kingdom. In Spain it is called *Salamantegna*. In Germany it is called by divers names, as *Maall*, and *Pumer maall*, *Ohn*, *Moll*, and *Moltch*, because of a kinde of liquor in it like milk, as the Greek word *Molge*, from *amalgma* to suck milk. Some in the Country of *Helvetia* do call it *Quaternitib*. And in *Alberia* it is likewise called *Rimatrix*. And thus much may suffice for the name thereof.

The description of their several parts followeth, which as *Aviolum* and other Authors write, is very like a small and vulgar Lizard, except in their quantity, which is greater; their legs taller, and their tail longer. They are also thicker and fuller then a Lizard, having a pale white belly, and one part of their skin exceeding black, the other yellow like Verdigrise, both of them very splendid and glittering, with a black line going all along their back, having upon it many little spots like eyes: And from hence it cometh to be called a Stellion, or *Animal stellatum*, a creature full of stars, and the skin is rough and bald, especially upon the back where those spots are, out of which as writeth the *Schwartz*, issueth a certain liquor or humor, which quencheth the heat of the fire when it is in the flame.

This Salamander is also four-footed like a Lizard, and all the body over it is set with spots of black and yellow, yet is the sight of it abominable and fearful to man. The head of it is great, and sometimes they have yellowish bellies and tails, and sometimes earthy. It is some question among the learned, whether there be any discretion of sex, as whether there be in this kinde a male and a female. *Pliny* affirmeth that they never engender, and that there is not among them either male or female, no more then there are among Bees. But this thing is justly crossed, both by *Belonius* and *Agricola*, for they affirm upon their own knowledge, that the Salamander engendereth her young ones in her belly like unto the Viper, but first conceiveth eggs, and the bringeth forth forty and fifty at a time, which are fully perfected in her womb, and are able to run or go so soon as ever they be littered: and therefore there must be among them both male and female.

The Countries wherein are found Salamanders, are the Region about *Trent*, and in the *Alpes*, and sometime also in *Germany*. They most commonly frequent the coldest and moistest places, as in the shadow of Woods, in hedges near Fountains and Rivers, and sometimes they are found among Corn and Thorns, and among Rocks. They are seldom seen except it be either in the Spring-times, or against rain, and for this cause it is called *Animal vernale*, and *Phenolus*, a Spring or rainy creature. And yet there were many of them found together in a hole near unto the City *Stueberg* in *Germany*, in the month of *February*, for they love to live in flocks and troups together,

together, and at another time in November, a living Salamander was found in a Fountain. Howbeit, if at any time it be seen foraging out of his den or lodging place, it is held for an assured presage of rain. But if the Spring-time fortune to be cold or frosty, then they keep home, and go not visibly abroad.

Some do affirm that it is as cold as Ice, and that it therefore quencheth heat or fire like a piece of Ice, which if it be true, then is the old Philosophical Maxim utterly false, namely, that all living creatures are hot and moist, being compared to creatures without life and sense, for there is not any dead or senseless body that so quencheth fire as Ice doth. But the truth is, that the Salamander is cold, and colder than any Serpent, yet not without his natural heat, which being compared to Armands, may truly be said to be hot, and therefore the venom of the Salamander is reckoned among Septicks, or corroding things.

Willchius.

It naturally loveth milk, and therefore sometimes in the Woods or near hedges, it sucketh a Cow that is laid, but afterwards that Cows udder or stock dryeth up, and never more yeeldeth any milk. It also greatly loveth the Honey-combe, and some Authors have affirmed, that they use to goe after air or fresh breath, like the Chameleon, yet they which have kept Salamanders in glass vessels, have observed by them any such thing. They are slow of pace, and void ground very negligently, and therefore it is justly termed a heavy and slothful Beast.

But the greatest matter in the Salamander to be enquired after, is whether it can live and be nourished by and in the fire, or whether it can passe through the fire without any harm, or quench and put out the flame. Which opinions in the very relation and first hearing, do crosse one another, for how can that either be nourished or live in the fire, which quencheth the flame being put into it? Aristotle that never saw a Salamander himself, but wrote thereof by hear-say, hath given some colour to this opinion, because he writeth, *Nomulla corpora esse animalium quæ igne non absumuntur Salamandra documenta est: quæ (ut alium) ignem inambulans cum extinguit.* That is to say, the Salamander is an evidence, that the bodies of some creatures are not wasted or consumed in the fire, for (as some say) it walketh in the fire and extinguisheth the flame.

Orus.

Now whether this befemed so great a Philosopher, to write upon hear-say, who took upon him to gather all natural learning into his own Graunge or store-house, and out of the same to furnish both the present and all future ages, I leave it to the consideration of every indifferent Reader that shall peruse this story. For mine own part, rather judge it to be lightness in him, to infer a matter of this consequence in the discourse of this Beast, without either Authors, or experience gathered by himself. This one thing I marvel at, why the Egyptians, when they will expresse or signifie a Man burnt, do in their Hieroglyphicks paint a Salamander, except either fire can burn a Salamander, or else contrary to all their customs, they demonstrate one contrary by another.

Nicander plainly affirmeth, that the Salamander doth without all harm passe through the fire, and the Scholiast addeth, that there are certain passages in the skin, out of which issueth a kinde of liquor that quencheth the fire: And he telleth a story of one *Andrew*, who did dip a piece of cloth in the blood of a Salamander, and tryed afterward whether it would burn or not, but did not finde, that it would burn, wherefore he put it upon his hand, and thrust that into the fire, and then also he felt no manner of pain. And therefore the said *Nicander* calleth this creature *Cipræbimus*, because of a certain fat humor which issueth out of it, quenching the fire, but I rather think that this fat humor maketh the skin to glitter, for if it were properly fat, it would rather kindle and increase the fire than quench or extinguish the flame.

*Suidas* followeth the common received opinion, that the Salamander quencheth the fire, (although it be not bred of the fire as Crickets are) like Ice; and when the fire is so quenched, it is vain to blow or kindle the flame again with any bellows, as they say have been tryed in the Forges of Smiths. And this also caused *Serenus* to write, *Sex Salamandra potens, nullisq; obnoxia flammis*: the potent Salamander is never hurt by flames. *Seneca* consenteth hereunto, and *Zoroaster*: and so great hath been the dotage about this opinion, that some have written that it ascendeth up to the fire neer the Moon, far above the reach of the Eagles or swiftest Fowls. Thus say they that write, and maintain the Salamanders abiding in the fire without harm. Now on the contrary, let us also hear their opinions, which deny this natural operation in the Salamander.

*Pliny* affirmeth, that in his own experience he found that a Salamander was consumed in the fire, and not the fire by it, for he saith he burned one to powder, and used the same powder in medicines.

*Sextus* also denyeth that it quencheth the fire, and unto this opinion agreeth *Disfordus*. *Anton* writeth, that when it is first put into the fire, it divideth the flame, and passeth through speedily without harm, but if it tarry long therein it is burned and consumed, because the liquor or humidity thereof is wasted. And this is also granted by *Galen*, *Theophrastus*, and *Niphus*. And *Metastachius* affirmeth that he cryed the flame, and found that if burning coals were laid upon it, then it burned like unto any other raw flesh, but being cast into the fire, it burneth not speedily.

*Albertus* writeth, that there were some which brought to him a certain thing which they called Wool, and said that it would not burn, but he found it not *Lana*, Wool, but *Lampro*, that is, a vapoury adherency of a thing which flyeth from the strokes of hammers upon hot burning Iron, and being collected upon cloth, or cleaving to any part of the Forge, it there becometh in these like yellowish pale Wool.

The said Author affirmeth, that he took a Spider, and laid the same upon a hot burning Iron, where it continued unpurged and unharmed without motion a great while, by reason of his thick skin and coldness, and unto another he suffered a little candle to be put, which instantly put it out. And for the same causes, that is to say, both the thickness of the skin, and cold constitution, cometh it to passe, that a Salamander can live so long in the fire without burning or consuming to ashes: for indeed the skin thereof is so hard, that it is cut or pierced with a knife with great difficulty; and so when the force of the fire hath broken the skin, then also issueth forth a cold humor, which for a season keepeth the heat out. For this Beast is said to be very full of humor, and the certainty thereof may most manifestly appear by his full and grosse body, and also by this, that it is seldom seen to issue or come forth of his den, except it be against rainy weather; and yet as the eggs of other Serpents being cast into a hot burning furnace, do for a season rest in the same unburned, and yet are afterward consumed, so is it with the Salamander.

There be some that have found a web out of the hair growing upon Salamanders, which can by no means be set on fire, but this is very false, because the Salamander hath no hair upon it at all. And this kinde of web rather cometh of a kinde of flux that *Pliny* writeth of, or rather of the *Amiantum*, called the *Albiss*, which is found in *Cyprus*, whereof they used to make coverings for the Theatres. This being cast into a fire, seems to be forthwith all in a flame, but being taken out again, it shineth the more gloriously. Cordus.

Some also do affirm, that such a piece of cloth or web, may be wrought out of the Salamanders skin, but *Brasavolus* denyeth both the vertue of the stone, and of the Salamanders hide or shell, for he saith he tryed the stone, and it would not be wrought into wooll or spun into thread, and when he cast the Salamanders shell or hide into the fire, it burned, and the matter cold liquor thereof did almost fire into his face.

But some then will demand, where had Pope Alexander that coat, which could not be purged but by fire, which made it alway as white as Snow, or that map or net at Rome, wherein (it is said) the Naphin of our Saviour Christ is preserved, which men say is not washed but in the fire, which thing was sent to a Bishop of Rome for a present from the King of *Tartary*. Unto whom I answer out of *Paulus Pictus* as followeth. There is a Province in *Tartaria* called *Chincinialar*, wherein is a Mountain abounding with Mines of Steel and Copper; now in this Mountain there is a kinde of earth digged up, which yeeldeth a thred like the thred of Wool. After the digging of it, up they dry it in the Sun, and then beat it in a brazen mortar, afterward they spin it, and weave it, in the same manner that they spin and weave other woollen cloth. After it is made, they have no means to purge it from spots or from filthiness, but to cast it into the fire for the space of an hour, and then it is taken forth again as white as any Snow.

There is also an Allum called *Alumen Sciole*, and it is the same which among the Ancients is called *After janius*, out of which also is made cloth that cannot burn, by reason of a certain Oyl that it containeth or yeeldeth to resist the fire. So out of the stone *Pyritus* found in *Kisheba*, there cometh out a green liquor pressed with dead coals, and after that, no fire can burn that cloth. There are also certain Mantles in *Bohemia*, (as witnesseth *Agricola*) which could never be burned. And out of *Magnesia* a scaly stone in *Bolsecrana*, they make tables, which cannot be clesed but by fire. It is also recorded, that the fore-named *After janius*, and pitch quenched in the juyce of Mallows or Mercurial, being anointed upon a mans hand, doth keep them from burning, or sense of extraordinary heat. So *Albertus* writeth of a stone which he calleth *Scullor*, or *Isustus*, which I take to be a kinde of the *Albiss* or *Amiantus*. And this stone is found (as the same Author writeth) in the farthest parts of *Spilis*, neer the Straights and *Hercules*-pillars. Carden.

And this thing seemeth the lesse strange, because they which are anointed with Bird-time, or else with Vinegar and the white of an egge, do not so quickly feel the strength of fire and heat, when they thrust their hands into the midst of it. It is also found, that the hearts of them that die of the heart-burning disease, or else are killed by poyson, cannot be burned with fire. And therefore when *Germanicus Cæsar* was dead, it being suspected that he was poysoned by *Piso*, they cast his heart into the fire and it would not burn, which thing was alleaged against him by *Vestilius* the Oratour. And one *Aesculapius* in an Epistle which he wrote to *Octavian Augustus* saith, that there is a poyson so extreame cold, that it keepeth the heart of a man poysoned therewith from burning, and if it lie long in the fire, it waxeth as hard as a stone, which so concreted is called *Proflis*, from the force of the fire, and from the matter whereof it consisteth it is called an humane stone. He also saith, that this is red in colour, mixed with some white, and is accounted precious, because both it maketh a man that weareth it to be a Conqueror, and also preserveth him from all manner of poyson.

When the Salamander is provoked, it calleth forth a white matter liquor or humor, and it is an audacious and bold creature, standing to his adversary, and not flying the sight of a man; and so much the lesse, if it perceive that a man prosecute and follow it, to harm and kill it. The biting of it is very exitial and deadly, and therefore the French men use this speech upon the biting of a Salamander:

*Si mordu t'a une aréssade,  
Prends ton lingent & le flassade.*

ST 3

Thât

That is, if a Salamander bite you, then betake you to the coffin and winding sheet. The Rhetoricians do ordinarily affirm, that when a man is bitten by a Salamander, he hath need of as many Physicians as the Salamander hath spots. And *Arnoldus* saith, that it hath in it as many venoms and means of hurting, as it hath colours distinguished one from another. For when it once biteth and falletteth teeth, it never letteth go, and being pulled off, it leaveth the teeth behind; and then there never can be any remedy, and therefore it must be suffered to hang upon the wound until it fall off, either willingly or wearied, or else compelled by the medicines that the wounded patient receiveth. For by this means only is the patient kept alive: yet this is a way to be remembered, that the Salamander doth not always bite, although provoked, for *Gesner* affirmeth, that he having two of them, could never by beating make them open their mouths, nor that in all his life did he ever hear of any man bitten by them. And of this thing he not only gathereth the difference of time; wherein their rage sheweth it self by biting, and when not, but also the difference of place and region, for that they bite in some Countries, and not in other. When they have bitten, there followeth a vehement pain and swelling upon the place, for the cure whereof there must be taken a decoction of Frogs, and the broth must be drunk, and the flesh applied to the fore; or else other common remedies against the poyson prescribed in the Treatise following.

The poyson hereof is great, and not inferior to the poyson of any other Serpent, for some times by creeping upon Apple-trees, it infecteth and poysoneth all the fruit, so that those which eat the same, die and languish they know not whereof: and if the heel of a man do but touch any small part or portion of the spittle of a Salamander, it maketh all the hair of the body to fall off. The poyson it self is not cold, as some have thought, but hot, like to the poyson of Cantharides, and therefore to be cured by the same means, as by vomits, Glysters, Ephemerons, and such like. Only Swine do eat Salamanders without harm or damage, for there is in them a kinde of resistance in nature, and yet if Man or Dog do chance to eat of that Swine that hath eaten a Salamander, it hath been observed that they perished by the same. And this poyson spreadeth it self the further when it is dead, because it is strengthened by putrefaction, and Wine and Water wherein one of these lyeth dead, is empoysoned and made mortal thereby to others. But in our days Salamanders are not so venomous, if there be any credit in *Bravolus*, howbeit I have heard and read, that if at this day a Salamander get into a heap of corn, she infecteth it, that whatsoever eateth of that corn, dyeth as it were of poyson, and the King of *Helvetia*, which are sucked by Salamanders, do ever after remain barren, and without milk, and sometime also they die of that evil. And as *Arnoldus* writeth, it casteth forth a certain matterly white humor like milk out of the mouth, whetsoever if a man or any other living creature do but tread, he is poysoned thereby, and at the least, all the hair of their body falletteth off, and in like sort they infect herbs and plants of the earth by their poyson.

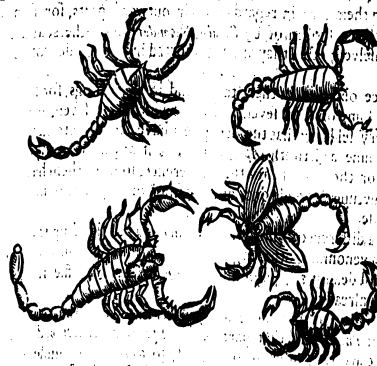
Sometimes it happeneth that beasts or men have swallowed Salamanders, and then the tongue is inflamed, and all the body falletteth into grievous torment, by cold corruption and putrefaction, part after part, and also pains in the fundament and in the stomach, likewise Dropsies, and impostumation in the belly, cramp of the guts, and retention of the urine. For the cure whereof they give sweet water, Calamints, Saint Johns Wort, sod with the shells of Pine-apples, leese of Cyperle, *Galbanum*, and Honey or Rozen, Ammoniac, and *Stirax*, New Cow-milk, the meal made of Flax-seed with sweet water, sweet Wine and Oyl to cause vomits: Scammony, and a decoction of Calamints and Figs, fat Bacon or Hogs-flesh, and also the Egges of a Tortoise, with the flesh thereof; besides infinite other remedies, ordained by the goodnesse of Almighty God, as Physicians know by their own studies and daily experiments. And therefore I hold it sufficient for me to have lightly touched them, referring those that are desirous to know more, unto the learned collection of *Carroum*.

Out of the Salamander it self arise also some medicines, for it hath a septicke power to eat and corrode to take away hairs, and the powder thereof cureth corns and hardnesse in the feet. The hear eyed to the wrist in a black skin, taketh away a quartain Ague; and also *Kirandis* writeth, that being bound unto a womans thigh, it stayeth her monethly flowers, and keepeth her barren: But this is worthily reprov'd for untruth, and therefore I will not commend it to the Reader. And thus much for the Salamander.

### Of the SCORPION.

*Scorpius* in Greek is attributed both to the Scorpion of the Land and of the Sea, although sometimes for difference sake, the Scorpion of the earth be called *Scorpius cheliferus*. The derivation is manifold according to some Writers, either of *Scorpiaceus* *ton son*, that is, dispersing his poyson, or of *Sekanos erpein*, because the motion of it is oblique, inconstant and uncertain, like as the flame of fire beaten with a small winde. The *Grecians* also use for a Scorpion *Bispa*, because it catcheth poyson, and *Odyper* from the number of his eight feet. And in *Ethiopia* there is a kinde of Scorpion which the *Greeks* call *Syrinx*. The *Latins* doe use indifferently *Scorpius*, *Sorpio nepa*, and Canter also *Vimula* and *Gepharis*, as we finde in *Pomponius*. The *Arabians* have many words, as *Harab*, *Acrib*, *Achriab*, and *Sawacen*, in *Pomponius*. *Algerat*, *Algerat*, and *Alghatari*, for little Scorpions which draw their tails after them.

them. Howbeit, among these names also *Algerat* significeth that little kinde of Scorpions, and *Algerat* the Scorpion with bunches on his back. The *Egyptians* according to the opinion of some, call a Scorpion *Acobabim*; the *Italians*, *Scorpius*, and the *French*, *Le Scorpion*; the *Spaniards*, *Alacran* and *Alacranis*, which name they have also, given to an Island in the *West-Indies* subject to their dominion. In *Cassilia* it is called *Esorpion*, and in *Germany*, *Ein Scorpion*.



The Countries which breed Scorpions, are these that follow. In *Egypt*, near the City *Coptus*, are very many great & pestilent stinging Scorpions, who kill as soon as they smite. Also *Ethiopia* and *Nubia* abound with Scorpions, especially the latter, wherein (as writeth *Leo Afric*) are every year found very many that die of their wounds. *Tenas* one of the *Cyclades* Islands, is called *Ophiessa*, because it yields many Serpents and Scorpions. Also in that part of *Mauritania* which is near the *Web*, are Scorpions with

wings and without wings: likewise in *Iberia*, *Caria*, and *Lybia*. And it is also said, that once there *Elianus* were many Scorpions brought into *India*, into that part of the Country where the *Rhyssobag* *Leo Afric* dwell. By the way betwixt *Susa* in *Persia* and *Meda*, there were wont to abound Scorpions under every stone and turf, for which cause, when the King of *Persia* was wont to go into *Meda*, he gave commandment unto his people to scow the way, by using all means to kill them, giving gifts to them that killed the greatest number of Scorpions. There is an ancient Town in *Africa* called *Pes-Strabo*, wherein the abundance of Scorpions do so much harm, that they drive away the inhabitants all the Summer-time every year untill *November* following. And in like sort *Diodorus* declareth of many other places utterly forsaken to avoyd the multitude of Scorpions, as namely, one part of *Arabia*, and the Region of *India* about *Arbaban*; or the river *Rhummus*, likewise near the *Cynopolis* in *Ethiopia*. There is also a City called *Alahanda*, standing betwixt two hills or mountains, like as a Chert turned inward, which *Apollonius* calleth *Chiam inversam Scorpiionibus plenam*; a Chert turned inward full of Scorpions. In an Island of *Canaria* also are many Scorpions, and chose most pestilent, which the *Turks* gather as often as they may to make Oyl of Scorpions. In *Italy*, especially in the Mount *Tifernum* in *Rome*, are also Scorpions; although not so hurtfull as in *Africa*, and other places, and it is thought that *Pylus*, whose nature cureth all kinde of venomous Serpents barks, did only for lucre sake bring Serpents and Scorpions into *Italy*, and there left them, whereby they encreased to that number and multitude; which now we see them have. And thus much may suffice to have spoken of the Countreys of Scorpions.

The kindes of Scorpions I finde also to be many, but generally they may be referred unto twain, whereof one is called the Scorpion of the earth, and the other the Scorpion of the water or of the Sea, whose discourse or history is to be found among the fishes, for we in this place doe only write of the Scorpion of the earth, which is also called by *Avien* a wilde Scorpion. Of this kinde there are many differences. First they differ in sex, for there are males and females, and the female is greater then the male, being also fat, having a grosser body, and a greater and sharper sting, but the male is more fierce then the female. Again, some of these have wings, and some are without wings, and some are in quantity greater then a Bean, as in *Helvetia*, near *Rapids* by *Zurich*, the Scorpions called *Vimula*, are of a reddish colour, as it were Rose-water and Wine mixed together: and from thence it is probable that they took their name, and from their colour, the Authors have observed seven severall kindes.

The first is white, and the biting of this is not deadly. The second is reddish, like fire flament, and this when it hath wounded causeth thirst. The third is of a pale colour, and therefore called by the *Grecians*, *Zepborider*, and these when they have wounded a man, cause him to live in continual motion and agitation of his body, so as he cannot stand still, but remaineth distract and without wit, always laughing, like a fool.

The fourth kinde is greenish, and therefore termed *Chlorus*, which having wounded, causeth intolerable trembling, shaking, and quivering, and cold, so that if the patient be laid in the hot sun, yet he thinketh that he freezeth like hay, or rather feelteth hay to fall upon him.

The fifth kinde is blackish pale, and it is called *Empellus*, it hath a great belly and broad, whereof the poyson is great, and causeth after stinging and admirable heaviness, and sorrowfull spirit. This kinde is called by *Gesner*, *Ventricosum*, because of the large belly, by the *Arabians*, *Alghatari*, and by *Pomponius*, *Gepharis*. It eateth herbs, and the bodies of men, and yet remaineth infatiable, it hath a bunch on the back, and a tay longer then other Scorpions.



The sixth is like a Crab, and this is called by *Ellianus* a flammant Scorpion, it is of a great body, and hath tongue and talers very solid and strong, like the Granuel of Crayfish, and is therefore thought to take the beginning from that Fish.

The seventh is called *Melicholus*, because of the Honey-colour thereof, or rather Wax-colour, and the wings it hath on the back, are like the wings of a Locust.

All Scorpions do differ among themselves in regard of their outward parts, for some of them have wings, as those in *India*, which are spoken of by *Strabo*, *Nicander*, and others, and therefore many times when they feel themselves to die, they are transported by the wind from one Country to another.

*Ellianus*  
*Pliny*.

There is also another difference observed in their tails, and in their stings, for some of them have six knots on their tails, and some of them seven, and those which have seven, are more hardy and fierce, but this falleth out very seldom, that the Scorpions have seven knots in their tail, and therefore much seldomer to have nine, as writeth *Apollonius*. For if any have seven, then is there likewise in them a double sting, for there is also another difference, some of them having a single, and some a double sting, yea, sometimes a treble one, and the sting of the male is more thick and strong then the sting of the female.

*Aristotle*.

And to conclude, there is also a difference in motion, for some of them hold up their tails from the earth, and these are not much venomous, others again draw them along upon the earth, a little rowled together, and these are most deadly, and poysonfull, some of them also lie from one Region to another, as we have shewed already.

Again, there is nothing that giveth a man a more lively difference, then the consideration of their poyson, for the Scorpions of *Phrygia*, and that part of the *Alpes* near *Noricum*, do never harm any living Creature, and therefore are they suffered to abound, so as they live under every stone. In the fort in the Isle *Sanguis*, the Scorpions are like unto those that are in *Castilia* or *Spain*, for in the fort in the Isle *Sanguis*, the Scorpions are like unto those that are in *Castilia* or *Spain*, for there the sting of the Scorpion doth not bring death, yet they cause a smarting pain, like the pain that cometh by the stinging of a Wasp, differing herein, that the Scorpions sting is more lasting, and continueth longer then the stinging of a Wasp, for it carrieth about a quarter of an hour, and by the biting thereof all are not pained alike, for some feel more, and some lesser pain. Contrary to these are the Scorpions of *Byzaria* in *Asia*, who ever with their tails wound mortally. And those in *Scythia*, which are great, and hurtfull unto men and beasts, killing Swine, who do not much care for any other Serpent, especially the black Swine, who do also die the sooner, if they much care for any other Serpent. The like may be said of the Scorpions of *Egypt*. And drink immediately after the wound received. The like may be said of the Scorpions of *Egypt*. And thus much for the different kinds of Scorpions, wherein nature produceth a notable variety, as may appear by all that hath been said. Now it followeth that we likewise make some relation of their congruity one with another.

*Pliny*  
*Ellianus*.

They are all little living Creatures, not much differing in proportion from the great Scarabe, or Horse-flie, except in the fashion of their tails. Their back is broad, and flat, distinguished by certain knots or seams, such as may be seen in Sea-Crabs, yet their head differeth, and hath no resemblance with the Crab, because it is longer, and hangeth farre out from the body, the Countenance whereof is fawning, and Virgin-like, and all the colour a bright brown. Notwithstanding the fair face, it beareth a sharp sting in the tail, which tail is full of knots, wherewithall it pricketh and hurteth that which it toucheth. And this *Pliny* affirmeth to be proper to this Insect, to have a sting in the tayl and to have arms: For by arms he meaneth the two grosse forks or tongues which come from it on both sides, in the tops whereof are little things like pinsons, to detain and hold fast, that which it apprehendeth, whiles it woundeth with the sting in the tayl.

It hath eight feet, four on the one side, and four on the other, from whence, as we have shewed already, it is called *Ophiopus*. For the feet and arms thereof is very much like unto the Sea-crab, and therefore may not unfitly be called either the mother or the daughter thereof. They have also tongues, wherewithall they use often to lick and smooth over their own bodies. And seeing of all other things they love fresh and clean linnen, wherinto they insinuate, and wrap themselves when they can come unto it, then also first of all they cleanse their whole bodies all over with their tongues, and next to their flesh put on this clean linnen, as a man would put on a shirt.

As we have said already it hath a tayl, wherein the sting thereof is placed, but what this sting is, divers Authors are of divers opinions concerning the same, some affirming it to be hollow, others denying it, finding in it no passage at all to contain or convey poyson. *Ellianus* again saith, that there must needs be in it a passage or cavity, although it be so small as by no means it can be perceived with the eyes of any mortall man, and in that sting is the poyson lesse visible, which when it pricketh, disperseth it self instantly into the wound. But what should this poyson be? whether a substance of spirituall humour; surely a substance, which although it be mole minima, yet facultati maxima, that is, of great power, although of small quantity. And therefore another Author (namely *Girardus*) writeth hereof after this manner; *Scorpius centro quodcumque esse creditur emittit humorem venenosum*: That is to say, The Scorpion out of a hollow center, sendeth forth a venomous humour. And of this venom we will afterwards discourse more at large. Thus much in this place may serve to make known the severall parts and members of this Serpent.

Now then it followeth that we inquire about the manner of their breed or generation, which being to be double, as divers Authors have observed, one way is by putrefaction, and the other by laying of egges, and both these wayes are consonant to nature, for *Lacinius* writeth, that some creatures

are generated only by propagation of seed, such are men, Vipers, Whales, and the Palm-tree, some again only by putrefaction, as the louse, sic, grasse, and such like imperfect things, and some both wayes, as Mice, Scorpions, Emmets, Spiders, Purlain, which first of all were produced by putrefaction: and since their generation are conserved by the feed and egges of their own kinde. Now therefore we will first of all speak of the generation of Scorpions by putrefaction, and afterward by propagation.

*Pliny* saith, that when Sea-crabs dye, and their bodies are dried upon the earth, when the Sun encreth into *Cancer* and *Scorpio*, out of the putrefaction thereof ariseth a Scorpion; and so out of the putrefied body of the Crayfish burned, arise Scorpions, which caused *Ovid* thus to write;

*Canescens litoreo si demas brachia cancro,  
Cetera supponas terre, de parte sepulta  
Scorpius exibat, caudaque minabitur unda.*

And again;

*Obtusum exemplis Cancer tellure lacertis,  
Scorpius exiguo tempore factus erit.*

In English thus;

*If that the arm you take from Sea-crab-fish,  
And put the rest in earth till all consumed be,  
Out of the buried part a Scorpion will arise,  
With hooked tayl doth threaten fur to hurt thee.*

And therefore it is reported by *Ellianus*, that about *Esamenu* in *India*, there are abundance of Scorpions generated, only by corrupt rain-water standing in that place. Also out of the Basilisk becom into pieces and so putrefied, are Scorpions engendered. And when as one had planted the herb *Basilis* on a wall, in the room or place thereof he found two Scorpions. And some say that if a man chew in his mouth fasting this herb Basil before he wath, and afterward lay the same abroad uncovered where no sun cometh at it for the space of seven nights, taking it in all the day time, he shall at length finde it transmuted into a Scorpion, with a tayl of seven knots.

*Hellius*, to take away all scruple of this thing, writeth that in *Italy* in his dayes, there was a man that had a Scorpion bred in his brain, by continuall smelling to this herb Basil, and *Gesner* by relation of an Apothecary in *Frank*, writeth likewise a story of a young maid, who by smelling to Basil, fell into an exceeding head-ache, whereof the dyed without cure, and after her death being opened, there were found little Scorpions in her brain.

*Aristotle* remembereth an herb which he calleth *Siffimbria*, out of which putrefied Scorpions are engendered, as he writeth. And we have shewed already in the history of the Crocodile, that out of the Crocodiles egges do many times come Scorpions, which at their first egression do kill their Dam that hatched them, which caused *Archelaus* which wrote Epigrams of wonders unto *Ptolemaeus*, to sing of Scorpions in this manner;

*In vos dissolvit morte, & rediit Crocodillum  
Natura extinguit, Scorpii omnipotens.*

Which may be Englished thus;

*To you by Scorpions death the omnipotent  
Ruins the Crocodile in nature's life extinct.*

And thus much for the generation of Scorpions out of putrefaction. Now we will proceed to the second manner of their generation, which is by propagation of seed: for although *Pomacanth* make some question about their copulation, yet he himself inclineth to that opinion, as neerer unto truth, which attributeth carnall copulation unto them, and therefore he alledgeth the example of flies, which admit copulation although they engender not thereby. Wherefore we will take it for granted, that Scorpions lay egges after copulation, which hapneth both in the Spring and Autumne.

And these are for the most part in number eleven, upon which they sit and hatch their young ones, and when once they are perfected within, those egges (which are in sight like the little worms out of which Spiders are engendered) then do they break their egges, and drive the young out. For as *Isidorus* writeth, otherwise the old should be destroyed of the young, even as are the *Phry* Crocodiles. Some again say, that the old Scorpions do devour their young ones.

Being thus produced by generation, they live upon the earth, and those which are bred of the Sea-crab, do feed upon the foam of the Sea-water, and a continuall white mould or chalk, near the Sea. But the Scorpions of *Ethiopia* do eat all kinde of worms, flies, and small Serpents. Yea those Serpents whose very dung being troden upon by man, bringeth exulcerations. And a tryall that Scorpions eat flies, was made by *Walpurg* at *Montpellier*, for having a young one in a box, for one whole moneth together it lived upon flies, and grew by the devouring of them bigger, being put into the Glass to him.

They live among tiles and bricks very willingly, and for this cause they abound in *Rome* in the wall called *Tyberem*. They are also in *Bomania* found in the walls of old houses, betwixt the stones.

*Kirimerides*.

*Philet*  
*Ellianus*.

Runes and the mortar. They have also clean clothes, as we have said already, and yet they abhorre all places whereon the Sun shineth. And it seemeth, that the Sun is utterly against their nature, for the same Scorpion which *Mephus* had at *Montpelier*, lived in the Glass until one day he let it in the Sun, and then presently after it dyed.

To conclude, they love hollow places of the earth near gutters; And sometimes they creep into mens beds, where unwares they do much harm: and for this cause the *Lybian*, who among other Nations are most of all troubled with Scorpions, do use to set their beds far from any wall, and very high also from the floor, to keep the Scorpions from ascending up into them. And yet fearing all devils should be too little to secure them against this evil, they also fasten the feet of their beds in vessels of water, that so the Scorpion may not attempt so much as to climb up unto them for fear of drowning. And also for their further safeguard, they were socks and hose in their beds so thick as the Scorpion cannot easily sting through them.

And if the bed be so placed that they cannot get any hold thereof beneath, then they climb up to the sieling, or cover of the house, and if there they finde any hold for their pinching legs to apprehend and fasten upon, then in their hatred to man-kind, they use this policy to come unto him. First one of them (as I have said) taketh hold upon that place in the house or sieling over the bed wherein they finde the man asleep, and so hangeth thereby, putting out and stretching his sting to hurt him, but finding it too short, and not being able to reach him, he suffereth another of his fellows to come and hang as fast by him as he doth upon his hold, and so that second giveth the wound: and if that second be not able likewise, because of the distance, to come at the man, then they both admit a third to hang upon them, and so a fourth upon the third, and a fifth upon the fourth, untill they have made themselves like a chain, to descend from the top to the bed wherein the man sleepeth, and the last striketh him: after which stroke he first of all runneth away by the back of his fellow, and every one again in order, till all of them have withdrawn themselves.

By this may be collected the crafty disposition of this Scorpion, and the great subtilty and malice that it is endued withall in nature, and seeing they can thus accord together in harming a man, it argueth their great mutuall love and concord one with another, wherefore I cannot but marvel at them who have written that the old ones destroy the young, all but one, which they set upon their own buttocks, that so the Dam may be secured from the sting and bitings of her son. For seeing they can thus hang upon one another, without harm; favouring their own kinde, I see no cause but that nature hath graced much more love betwixt the old and the young ones, so as neither the old do first destroy the young, nor afterward; that young thus preferred, in revenge of his fellows quarrell, killeth his Parents.

It is reported by *Aristotle*, that there is a hill in *Caria*, wherein the Scorpions do never sting any stranger that lodge there, but only the natural born people of that Country. And hereto *Pliny* and *Jellianus* seem to subscribe; when they write that Scorpions entraines *hemit mantes*, that is, Scorpions bite strangers but gently. And hereby it may be collected, that they are also by nature very suspicious, and can discern betwixt nature and nature; yea the particular difference in one and the same nature. To conclude, Scorpions have no power to hurt where there is no blood.

The naturall amity and enmity they observe with other creatures cometh now to be handled, and I finde that it wanteth not adversaries, nor it again hath no defect of poyson or malice to make resistance and opposition, and to take vengeance on such as it meeteth withall. The principall of all other subjects of their hatred, are Virgins and Women, whom they do not only desire to harm, but also when they have harmed, are never perfectly recovered. And this is at all times of the day, but unto men they are most dangerous in the morning fasting, before they have vented their poyson, and this is to be observed, that their tails are never unprovided of stings, and sufficient store of venom to hurt upon all occasions.

The Lyons is by the Scorpion put to flight wheresoever he seeth it, for he feareth it as the enemy of his life, and therefore writeth *S. Ambrose*, *Exiguus Scorpionis ausu exagitantur Leæ*, the Lion is much moved at the small sting of a Scorpion. Scorpions do also destroy other Serpents, and are likewise destroyed by them. There was one *Celartus* a Physician in *Padua*, who put together into one Viall, a Viper and a Scorpion, where they continually fought together, untill they had killed one another. The Swine of *Sybia*, which do safely eat all other kinde of Serpents and venomous beasts, without all harm, yet are destroyed by eating of Scorpions, and so great is the poyson of the *Sibarian* Scorpion, that the dung thereof being trode upon breedeth ulcers.

And as in this manner we see the virulence, and naturall evil of Scorpions against other living creatures, so now we are to consider the terrors of the Scorpion, for God in nature hath likewise ordained some bodies, whereby the Scorpion should be, and is driven away, feared and destroyed.

First of all therefore men, which are the chief, and head of all living Creatures, do by naturall instinct, kill and destroy Scorpions, and therefore *Galen* writeth thus, Let us (saith he) kill Scorpions, Spiders, and Vipers, not because they are evil in themselves, but because it is ingrained in us by nature, to love that which is good unto us, but to hate and avert from that which is evil unto us, *Non consilium est gemitum de his fieri ad fecum*, not considering whether it were so bred or not. And have shewed their generation out of puerfection to be by heat, so also is their destruction by heat, for they are not able to abide the heat of the Sun, and therefore, although they cannot live in most Northern Countreys, but in the hotter, yet in the hotter they choose shadows, holes of the earth, covertures of houses, and such like vile and obscure places, to succour and secure themselves in.

Jellianus.

Albertus.

Jellianus.

It is also reported, that if Scorpions do at any time behold a Scellion, they stand amazed and wonderfully astonished. The Viper also having killed a Scorpion, becometh more venomous, and the Isis of Egypt destroyeth Scorpions. There are a little kinde of Emmets, called by the *Arabians*, *Gitaras*, which are eaters of Scorpions. The quick-sighted Hawks also, from whose piercing eye no Serpent can be hid, when he seeth a Scorpion, he neither feareth nor spareth it. It is also thought that Hares are never molested by Scorpions, because if a man or beast be annoyed with the remnet of a Hare, there is no Scorpion or Spider that will hurt him. Wilde Goats are also said to live without fear of Scorpions, even as the *African* *Psylli* of whom we have often spoken.

Now this vertue against Scorpions is not only in living things, but also in the Plants of the earth, and therefore *Sylviu* writeth, that the seed of Nefe-wort burned or scorched doth drive away Serpents, and resist Scorpions and so doth the root of the Mast-tree, and the seed of Violets, and the same vertue is ascribed to the herb *Lychnis*, which is Englished Calves-foot, and also to the seed of wilde Parsnip.

The smell of Garlick and wilde Mints set on fire, or strewed on the ground, and Dittany have the same operation: and above all other, one of these Scorpions burned, driveth away all his fellows which are within the smell thereof, and therefore this is a most usuall thing in *Asia* and *Africa*, to perfume their houses with Scorpions burned, and in stead thereof they make use of little pills of *Galsbanum*, *Sandaracha*, with butter, and the fat of Goats, and thereof altogether make their perfume: also Betony, and wilde Bellitory with Brimstone. They use also to cover pans with certain things called by them *Alkhan* and *Alsa*, and with these they compass the place wherein the Scorpion lodgeth, and then it is found that they can never fly any more from that place. And *Rafsi* some in stead thereof, powr Oyl into their holes after them for the same effect. And the Husband-men of *Mauritania* doe tyo and fasten to their bed-side, sprigs of white thorn, and Hellebore, wherewithal by a secret antipathy in nature, they drive away and keep themselves safe in their beds from the annoyance of Scorpions.

By touching of Hellebore they lie dead and overcome, but if one touch them again with white Elebore, they revive, and are released from their former stupefaction. It is also said that the leaves of water-mallows do also astonish Scorpions, and so also doth the Radish-root. The Scorpion with Basil in her mouth destroyeth the Scorpion, and so doth Tunicle and Mustrom of trees. To conclude, the spittle of a man is death unto Scorpions; and therefore when a certain fellow took upon him to be a cunning Charmer, and by incantation to kill a Scorpion, he added to the words of his Charm a treble spitting in the mouth of the Serpent, and so it dyed: whereupon *Hesiodus* which was present, and saw this Charmer, did afterward by himself alone at home, make small spittle without a Charm; and so found that it alone killeth Scorpions, especially the spittle of a man fasting, or very thirsty. Moreover, there be certain Lands wherein no Scorpions will live, as that about *Clupea* in *Africa*, and the dust of the Island *Gaulis* near *Certina*, being sprinkled upon a Scorpion, doth incontinently kille it. And so much also writeth *Hermolans*, of the Region *Galatia*.

These and such like things are observed by our painfull and industrious Ancestors about the nature of Scorpions, as well that which is hurtfull unto them, and they are afraid of, as those to which they are enemies in nature, and wound mortally when they light upon them. It is remembered by *Tertius* that *Orion* was slain by a Scorpion, whereupon the Poets have made many tales. They say, that when he was grown to be a man he was a great hunter, and a continual companion of *Diana*, who glorying much in his own strength, boasted that he was able to overcome any Serpent or other wild beast, wherewith the Gods being angry for revenge, and taking down the pride of this young man, caused the earth to bring forth a Scorpion, who killed *Orion*. Wherewith *Diana* was very forry, and therefore in lamentation of her champion, and for the good deeds he had done unto her, translated him into heaven, close by the constellation of the Bull. *Lycan* on the other side saith, that *Diana* sent this Scorpion to kill him, envying his famous success in hunting, and that afterward the Goddess taking pity on him, translated him into heaven. Others write again, that he had his eyes put out by *Oemion*, and that he came blind into the Island *Lanania*, where he received a horse of *Vulcan*, upon which he rode to the Sun-rising, in which journey, he recovered again his eye-sight, and so returning, he first determined to take revenge upon *Oemion* for his former cruelty. Wherefore he came into *Greece*, and seeking *Oemion*, could not finde him, because he was hid in the earth by his Citizens, but at last coming to him, there came a Scorpion and killed him for his malice, rescuing *Oemion*. These and such like fables are there about the death of *Orion*, but all of them joyntly agree in this, that *Orion* was slain by a Scorpion. And so saith *Antilogus* was one *Panopem* a Hunter.

There is a common adage, *Comis Scorpionum*, a Raven to a Scorpion, and it is used against them that perish by their own inventions: when they set upon others, they meet with their matches, as a Raven did when it preyed upon a Scorpion, thus described by *Alciatus*, under his title *Iusta ultio*, full revenge, saying as followeth.

*Raptat volucer captum pede corvum in auris*  
Scorpion, audaci per amia parva gula.  
At ille insipio sensum per membra veneno,

The reverend Crow for prey a Scorpion took  
Within her foot, and therewithall also did bite,  
But he himself a bar by force and stinging strokes,

*Raptorem in fygias compulsi ulior aqua.*  
*Orius res digna aliis qui fata parabat,*  
*Ipsa perire, propriis succubique dolis.*

Which may be Englished thus;

So ravener in the Stygian Lake did die. (did kill)  
O full game I that he which ever for bellies sake  
By his own deeds should fall into death's will.

There

Galen.

Ponzettus.

Arnolius.  
Actius.Palladius.  
Rafsi.Strabo.  
Plutarch.

Gillius.

Attius.

Solimus.

Cyrallus.

There be some learned Writers, who have compared a Scorpion to an Epigram, or rather an Epigram to a Scorpion, because as the sting of the Scorpion lyeth in the tayl, so the force and virtue of an Epigram is in the conclusion, for *vel agiter et falso mordet, vel iucunde et dulciter desinit*, that is, either let it bite sharply at the end, or else delight pleasingly. There be many wayes of bringing Scorpions out of their holes, and so to destroy and take them, as we have already touched in part, unto which I may add these that follow: A perfume made of Oxe-dung, also Storax, and Arsenick. And *Pliny* writeth, that ten Water-crabs beaten with Basil is an excellent perfume for this purpose, and so is the ashes of Scorpions. And in *Padua* they use this art, with small flicks or straw they touch and make a noyse upon the stones and mortar wherein they have their nests, then they thinking them to be some flies for their meat, instantly leap out, and so the man that deluded them is ready with a pair of tongs or other instrument to lay hold upon them and take them, by which means they take many, and of them so taken, make Oyl of Scorpions. And *Cassianus* writeth, that if a mans hand be well anoynted with juice of Radish, he may take them without danger in his bare hand.

Cardan.

In the next place we are to proceed to the venom and poyson of Scorpions, the instrument of sting whereof, lyeth not only in the tayl, but also in the teeth, for as *Ponssetius* writeth, *Ladri forpius mori si illi*, the Scorpion harmeth both with teeth and tayl, that is, although the greatest harm do come by the sting in the tayl, yet is there also some that cometh by their biting. This poyson of Scorpions, (as *Pliny* out of *Apolodorus* writeth) is white, and in the heat of the day is very fervent and plentifull, so as at that time they are insatiably and unquenchably thirsty, for not only the wilde or wood Scorpion, but also all other are of a hot nature, and the symptoms of their bitings are such as follow the effects of hot poysons: and therefore saith *Rafsi*, all their remedies are of a cold quality. Yet *Galen* thinketh otherwise, and that the poyson is cold, and the effects thereof are also cold. For which cause *Rondeletus* prescribeth Oyl of Scorpions to expell the stone, and also the cure of the poyson is by strong Garlick and the best Wine, which are hot things. And therefore I conclude, that although Scorpions be most hot, yet is their poyson of a cold nature.

In the next place, I think it is needfull to expresse the symptoms following the striking or biting of these venomous Scorpions, and they are (as *Aetius* writeth) the very same which follow the biting or poyson of that kinde of great *Phalangis* Spider, called also *Tetragnatum*, and that is, they are in such case as those persons be which are smitten with the Falling sicknesse.

He which is stung by a Scorpion, thinketh that he is pressed with the fall of great and cold hayl, being so cold, as if he were continually in a cold sweat, and so in short space the poyson differseth it self within the skin, and runneth all over the body, never ceasing untill it cometh to possess some predominant or principall vital part, and then followeth death. For as the skin is small and thin, so the sting pierceth to the bottom thereof, and so into the flesh, where it woundeth and corrupteth either some vein, or arterie or sinew, and so the member harmed swelleth immediately into an exceeding great bulk and quantity and aking, with insufferable torment. But yet (as we have already said) there is a difference of the pain, according to the difference of the Scorpion that stingeth. If a man be stung in the lower part of his body, instantly followeth the extension of his wile member, and the swelling thereof: but if in the upper part, then is the person affected with cold, and the place smitten is as if it were burned, his countenance or face distorted, glewly spots about the eyes, and the tears viscous and slimy, hardnesse of the articles, falling down of the fundament, and a continuall desire to egestion, foaming at the mouth, coughing, convulsions of the brain, and drawing the face backward, the hair stands upright, palenesse goeth over all the body, and a continuall pricking like the pricking of needles.

Also, *Gordomus* writeth, that if the prick fall upon an artery, there followeth swooning, but if on a nerve, there speedily followeth putrefaction and rottennesse. And those Scorpions which have wings, make wounds with a compasse like a bow, whose succeeding symptoms are both heat and cold, and if they hurt about the canicular dayes, their wounds are very seldom recovered.

The Indian Scorpions cause death three moneths after their wounds. But most wonderful is that which *Strabo* relateth of the *Albanian* Scorpions and Spiders, whereof he saith are two kindes, and one kinde killeth by laughing, the other by weeping. And if any Scorpion hurt a vein in the head, it causeth death by madnesse, as writeth *Paracelsus*. When an Oxe or other beaste is stricken with a Scorpion, his knees are drawn together, and he halteth, refusing meat; out of his nose floweth a green humour, and when he is laid, he careth not for rising again.

These and such like are the symptoms that follow the bitings and stings of Scorpions, for the cure whereof I will remit the Reader to that excellent discourse written by *Wapler*, wherein are largely and learnedly exprest, whatsoever Art could collect out of nature. And seeing we in our Country are free from Scorpions, and therefore shall have no need to fear their poyson, it shall not I trust offend my Reader, if I cut off the relation of Scorpions cures, as a thing which cannot benefit either the English Reader, or else much adorn this History, and so I will proceed to the medicines drawn out of Scorpions.

The application or use of Scorpions in medicine, is either by powder or by Oyl, or by applying them bruised to their own wounds, wherefore every one of these are to be handled particularly, and first of all for the powder, it is made by ustion or burning in this manner. They take ten Scorpions and put them alive into a new earthen pot, whose mouth is to be dammed up with loam or such like huffe, then must it be set upon a fire of Vine-tree-threads, and therein must the pot

stand day and night untill all within it be consumed to powder, and you shall know by their white colour when they be enough; otherwise, if they be brown or burned, they must be continued longer, and the use of this powder is to expell the stone.

Again, they use to make this powder another way, they take twenty Scorpions, and put them in a little earthen pot with a narrow mouth, which mouth must be stopped, and then the pot put into a Furnace by the space of six hours, which Furnace must also be kept close within, and with a gentle fire: then after six hours take off the pot, and bruite the Scorpions into powder, and keep that powder for the use aforesaid. There are other wayes also to prepare this powder, but in all preparations the attendant and assistant must take heed of the fume or smoke that cometh from it, for that is very venomous and contagious.

But besides, there are many things to be observed herein, as first, that the Scorpions be alive, and that they be killed in Oyl, then that they be put in whole, with every member, without mutilation, and that the Scorpions appointed for this consecration, be of the strongest poyson, and the time of their collection to be when the Sun is in *Leo*, and not in *Scorpio*, as some without reason have imagined.

The Oyl so made, is distinguished into two kindes, one simple, and the other compound. The simple is made of a convenient number of Scorpions, (as it were twenty if they be great, and more if they be little) and they being put into a glasse vessel, Oyl of bitter-Almonds must be powred upon them, and so the vessel stopp'd close and set in the Sun by the space of thirty dayes, and then stirred and used. Yet the women of *Ferrara* use Oyl-olive in stead of Oyl of bitter-Almonds, and also to observe quantity of Oyl, but fill the pot full, and likewise no order in the number of the Scorpions, putting one to day and another to morrow, and so more the next week or month, as they can finde them.

The compound-Oyl is thus made, they take round *Astrólogo*, *Cypresse*, and *Gentian*, the roots of *Capars*, and upon these they pour Oyl of bitter-Almonds, and soak the roots in the Oyl in the hot sun for the space of twenty dayes, then take they a complete number of Scorpions, from betwixten ten to fifteen, these they put again to the Oyl, and so stop up the mouth again, and set it the second time in the sun thirty dayes, and afterward strain it and use it. This compound-Oyl is not so much approved by *Brasavolus*, as the former simple, because the first hath more Scorpions, and the second is stuffed or seasoned with spices.

The green Scorpion which is bred of Basil, having seven knots in the tayl, being beaten and powdered with the herb Scorpion, and so made into pills, then dried and put into a glasse, are very profitable to him that hath the Falling-sicknesse, if he take of them three every morning fasting in temperate Wine, but these being given to a sound man putteth him clear out of his wits. If a man take a vulgar Scorpion and drown the same in a porringer of Oyl in the wane of the Moon, and therewithall afterward anoynt the back from the shoulders to the hips, and also the head and forehead, with the tips of the fingers and toes of one that is a demoniacke or a lunaticke person, it is reported, that he shall ease and cure him in short time. And the like is reported of the Scorpions sting joyned with the top of Basil wherein is seed, and with the heart of a Swallow, all included in a piece of Harts skin.

The Oyl of Scorpions made of common Oyl-olive is good for the pain in the ears infused by distillation; also it cureth a Pleurisie in this manner. They take meal out of a Windmill, and make thereof with water, paste, or little cakes, in quantity like a *Prince* Crown, these must be sod in a frying-pan in Oyl of Scorpions, and so applied as hot as can be to the place where the pricking is, and so kept to the same very hot, and when it beginneth to be cold, let new be applied still, nine times together; successively one time after another. Scorpions bruised in new sweet Wine, doe cure the Kings-evil. The ashes of a Scorpion infused by the yard into the bladder, breaketh and disperseth both the stone of the bladder and the reyns. And the like operation hath a vulgar Scorpion eaten with vinegar and Rose-cakes applied to the gowly members, it many times easeth the inflaming pains thereof.

The Oyl of Scorpions is very available in the time of Plague, both by Oyntment and also in position: wherewithall one did affirm to *Wapler* that he gained a great summe of money, which he prepared in this manner. He took a hundred Scorpions, and sod them in the oldest Oyl-olive he could get, untill such time as the Scorpions were consumed, then did he strain them through a linen cloth, adding unto it an ounce of Rubarb, and so shutting it close in a glasse bottle, he set it forty dayes together in the sun, and afterward he gave of it to be used in time of infection, advising them that had it to apply it in oyntment to the pulse, heart, hinder part of the head, neck and nostrils. And if a man began to be sick, within twelve hours after the first sence of his pain, he was annoynted herewith about the thymour, and then was it launced. This oyntment is also commended against all manner of poyson, not onely of other Serpents and venomous beasts, but also of the Scorpion it self. And thus much for the history of the Scorpion.

## of the SCYTALL.



This Serpent called by the *Grecians* *Soytale*, is likewise termed by the *Latinists*, *Soytalis*; and by some *Soicalis*, *Picalis*, *Scistalis*, and by *Albertus*, *Stula*, which we have already interpreted a *Dipsa*, but all of them are most manifestly corrupted from *Soytale*, the first *Grecian* word. And therefore I will not stand to confute them that call it also *Cacilia*, a blinde worm, because (after the manner of other Serpents) it eateth no Fennell, but this *Cacilia* or blinde Worm, we shall afterward demonstrate to be our English Slow-worm. This *Soytalis* is very full of marks or spots upon the back, so variable and delectable, that it possesseth the beholders with admiration, and almost bringeth them asleep looking thereon; for it is also slow, and moveth softly, wherefore it cannot pursue where it would do harm; in stead therefore of celerity, these naturall spots doe hold them that it doth desire to harm, like as they were stupefied and astonished. And in this brightness of the scales, first of all it must lay aside the winter-skin, or else there appeareth not any splendour at all. And it is also said to be so hot and fervid, that it eateth skin in the Winter, according to this saying of *Lycanus*:

*Et Soytale sparis etiam nunc sola pruinis*

*Excussit postura sua.*

That is in English thus:

None but the *Soytall* while *Winter*-frosts abide,

Out of his spotted skin and Scales, doth glide.

The outward form or visible proportion of this Serpent, is like that which we have already called a *Double-head*, and the *Latiner*, *Amphibius*, except that the tayl hereof is flatter and thicker. The length of this Serpent is like the longest Worms of the earth, and the thickness like the hilt or handle of a spade. And the greatest difference betwixt this and the *Double-head*, is that this goeth but one way, and the *Double-head* goeth as well one way as another: and the colour hereof is like the colour of the other. The general description of this Serpent is thus expressed by *Nicolas*:

*Difformi similes reperit Soytales, Amphibione*  
*Pinguis est tamen, & cauda, quae nulla fere exit,*  
*Craffior, ut quantum solita est comprehendere lignum,*  
*Curva manu stridit, quoties tenet ipsa ligonem,*  
*Tam probe, vagans, vixit quam reptile caelo,*  
*Quod facundia rerum sua glenit viscera tellus.*  
*Nec postquam lapsus ventum tempore variis,*  
*Magna Deum quando profert serpentina mater,*

*Liquerit obstruam confusa cubile patrem,*  
*Et mitius tepido sub sole extiterit artem,*  
*Pandunt se fuscis tenebris exeat herbas,*  
*Sed per opaca marcescunt in decubitu manit*  
*Se tenet, & multo graviter later obruta sum,*  
*Eque alta sua conquisit sibi pulvere terra:*  
*Nec licet id magno cupiat, studioque labori*  
*Arefcens, sitim prorsus est depellere fovea.*

Which may be Englished thus,

The *Soytall* like the *Double-head* then shals in seasons find,  
Yet is it fatter, and taylor that hath no, and much thicker le,  
As big as crooked hand is wonted for to wind  
The best and best of digging spade, the earth they rife,  
As long it is, as that thin crawling worm which becoms vain,  
Begins on fruitful earth, when hewels warmly muffled are,  
And when the Mother-goddess great sends forth her creeping train,  
Which is, I keep you, fresh time of Spring, both calm and fair,  
Then leaves it off, his wonted bed, in rock obscure,  
And in what sun he stretches out his limbs, and shines abroad,  
Eating the new sprouting blades of Rensall-herb, so putting teeth in use,  
In holes, of the declining hills, so keep both great and small,  
Where time in deepest sleep of buried nature it doth pale,  
And being hungry, the earth in top of hole it eat,  
Quenching the thirst by force of dryest chappes as grasse,  
Though without pain, desireless it seeks these drinks and meats.

The biting of this Serpent is like the biting of the *Double-head*, and therefore the cure in the same manner, wherefore I shall not need to repeat the signs thereof, or the cure in this place. And so I will conclude the story of this Serpent.

## Of the SEA-SERPENTS.

Among the manifold kinds of Sea-serpents, as well known as unknown, (whereof some are like the Lamprey, some like the *Myra*, and many other like the Serpents of the earth, except in their head, as *Aristotle* writeth, for that is more like the head of a Conger than a Serpent) it peculiarly hath one kinde, in colour and form not unlike an *Eel*, in length about three cubits, in the gills and finnes resembling a Conger, but it hath a longer snout or beak, which is also fortified inwardly with very many small sharp teeth, the eyes not so great, a smooth or pield skin, and hanging over at the back, having no scales, so as it may easily be sleayed. The belly of it is betwixt red and white, and all the body over is set with spires, so as being alive it is not handled without danger. And this is by *Pliny* called the Dragon of the Sea, which cometh out of the Sea into the lands, and therein with an admirable celerity and dexterity maketh his lodging place. For the snout thereof is sharper then the Serpents of the earth, therefore therewith it diggeth and hideth itself in the hole or hollow place which it hath made. This is also called by *Pliny* *Ophidion*, but I think it better to follow *Aristotle*, who doth call it *Ophiothalutis*, a Sea-Serpent, the colour whereof is blacker or dimmer then the Conger.

There be also Vipers of the Sea, which are in shew little fishes, about a cubit long, having a little horn in their forehead, the biting or sting whereof is very deadly, and therefore when the Fisher-men have taken any one of these, they instantly cut off the head and bury it in the sand, but the body they eat for good meat: yet these Serpents are thought to be none other then the Fishes called *Arauc*, or Spider-fishes, saving that they are said to have a sharp sting in their head, & this a horn, for all Water or Sea-serpents have harder and less heads then the Serpents of the land.

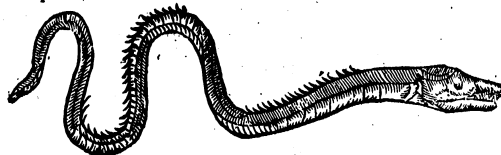
In the *Germane* Ocean there is found a Serpent about the bignesse of a mans leg, which in the tayl carryeth a sting as hard as any horn, this haunteth only the deepest part of the Sea, yet is it sometime taken by the Fisher-men, and then they cut off the tail, and eat the residue of the body. Yet I will not expressly define whether this may be called a Sea-Serpent, or a Serpentine-fish; it may be it is the same that is a Fork-fish, or Ray, which by reason of the tayl thereof, it might give occasion to *Albertus* to call it a Serpent of the Sea.

There be also Snakes or Hyders in the Sea, for although all Water-serpents, as well of the fresh, salt, and sweet waters may be called *Hyders*, or Snakes, yet there be some peculiar Snakes, such as those in the *Indian* Sea, where they have broad tayls, and they harm more by biting with the sharpness of their teeth, then by any venom that is contained in them; and therefore in this they somewhat resemble the Snakes of the earth. And *Pliny* writeth, that once before *Perfis*, upon the coasts of certain Islands, there were seen of these Sea-hyders very many, of the length of twenty cubits, wherewithall a whole Navy or fleet of ships were mightily affrighted. And the like is reported of three other Islands, lying betwixt the promontory of *Carmania* and *Arabia*; and such were those also in the *African* Sea, who are said by *Aristotle* not to be afraid of a Gally, but will set upon the men therein, and over-turn it. And he himself saw many bones of great wilde Oxen, who had been destroyed by these kinde of Sea-snakes or Hyders.

The greatest River that falleth into the red Sea, is called *Sinbu*, the fall whereof as far off, seemeth to the beholders to be like winding Snakes, as though they were coming against the passengers, to stay them from entrance into that Land; and there is not only a sight or resemblance of Serpents there, but also the very truth of them, for all the Sea-men know when they are upon these coasts, by the multitude of Serpents that meet them. And so do the Serpents called *Grae* about *Persis*. And the Coast of *Barac* hath the same noysome premonstration, by occurrence of many odious, black, and very great Sea-serpents. But about *Barygaza* they are lesse, and of yellow earthy colour; their eyes bloody, or fiery red, and their heads like Dragons. *Kerandis* writeth of a Sea-Dragon, in this manner, saying: The Dragon of the Sea is a fish without scales, and when this is grown to a great and large proportion, whereby it doth great harm to other creatures, the winds or clouds take him up suddenly into the air, and there by violent agitation, shake his body to pieces; the parcels whereof so mangled & torn asunder, have been often found in the tops of the Mountains. And if this be true (as it may well be) I cannot tell whether there be in the world a more noble part of Divine providence, and sign of the love of God to his creatures, who armeth the clouds of heaven to take vengeance of their destroyers. The tongue of this Sea-Dragon (saith he) is like a Horses tayl, two foot in length, the which tongue preserved in Oyl, and carried about by a man, safeguardeth him from languishing infirmities, and the fat thereof, with the herb *Dragon* annoynted on the head or sick parts, cureth the head-ache, and driveth away the Leprosie, and all kinde of scabs in the skin.

Here is also the picture of another Sea-serpent, very like to the Serpent of the earth, being three or four cubits long, having a rounder belly then an *Eel*, but a head like a Conger, and the upper chap is longer, and standeth out further then the nether chap; the teeth grow therein as they do in Lampreys, but they are not so thick, and it hath two small finnes near the gills like an *Eel*. The colour of it is yellow, but the beak and belly is of Ash-colour, the eyes yellow, and in all the inward parts it doth not differ from a Lamprey, and there is no man of any understanding, (as writeth *Rondeletius*) but at the very first sight, will judge the same to be a Serpent although the flesh thereof

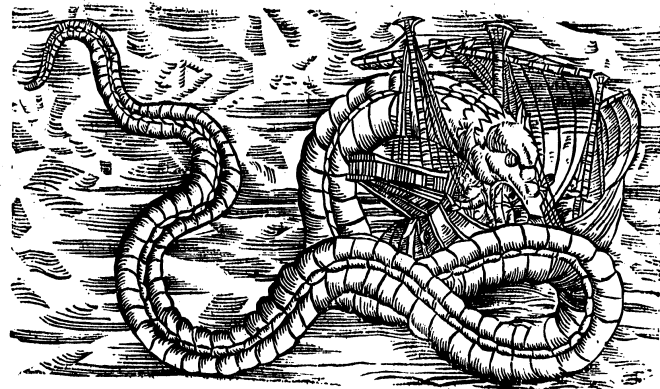
be no more harmfull then the Conger or Lamprey; yet for similitude with other Serpents, I could not chuse but expresse the same in this place,



There be also in the *Swedish* Ocean or *Baltick* Sea, Serpents of thirty or forty foot in length, whose picture is thus described, as it was taken by *Olav Magnus*, and he further writeth, that these do never harm any man untill they be provoked.



The same Author also expresth likewise the figure of another Serpent, of a hundred and twenty foot long, appearing now and then upon the coasts of *Norway*, very dangerous and hurtfull to the Sea-men in calms and still weather, for they lift up themselves above the hatches, and suddenly catch a man in their mouths, and so draw him into the Sea out of the Ship: and many times they overthrow in the waters a laden Vessel of great quantity, with all the wares therein contained. And sometimes also they fet up such a spire above the water, that a Boat or little Bark without sayls may passe through the same. And thus much for the Sea-serpents.



### Of the SEPS or SEPEDON.

Although I am not ignorant that there be some which make two kindes of these Serpents, because of the two names rehearsed in the title, yet when they have laboured to describe them severally, they can bring nothing or very little wherein their story doth not agree, so as to make twain of them, or to handle them asunder, were but to take occasion to tautologize, or to speak one thing twice. Wherefore *Gesner* wisely pondering both parts, and after him *Carronus*, deliver their opinions, that both these names do shew but one Serpent, yet according to their manner, they expresse them as if they were two. For all their writings do but minister occasion to the Readers to collect the truth out of their labours, wherefore I will follow their opinion, and not their example. Sepedon and Seps cometh of *Sepem*, because it rotteth the body that it biteth: in colour it neerly resembleth the *Hæmorrhæ*, yet it usually goeth by spires and half-hoops, for which cause as it goeth, the quantity cannot be well discerned, the pace of it being much swifter then the *Hæmorrhæ*. The wound that it giveth is smarting, entering deep and bringing putrefaction, for by an inexpressible celerity, the poyson passeth over all the body, the hair rotteth and falleth from all parts, darknesse and dimnesse is in the eyes, and spots upon the body, like as if a man had been burned in the Sun. And this Serpent is thus described unto us by *Nicander*;



*Jam quæ Sepedon species sit, quæque corpus  
Accipe: diversa tratiūm ratione figurat.  
Quin etiam mutile nulla infunt cornua fronti,  
Et color, bifurcata qualem est speculare tapetis,  
Grande caput, brevior dum currit, cauda videtur:  
Quam tamen obliquo majorem tramite ducti.  
Quod sit ab hoc vulnus, magnos nocivique dolores*

Which may be Englished thus;

*Sepedon shape now take, and what his form of body is,  
It doth me go as Hemorrhoe doth, but traileth diversly.  
His powdered head of Hemorrhoe borne full happily doth misse,  
And colours are as manifold as works of Tapestry:  
Great is his head, but running seems the tail but small,  
Which winding, it in greater path draws after to and fro,  
But where it wounds, by pains and torments great it doth appall,  
Killing the wounded, infusing poison so.  
Whereby conformed are the lean and slender sinews,  
And dried skin lets hair fall off apace,  
Like as the winds drive whiles from top of thistle Cardus,  
By sides the body filth, as with Sun parched, looseth grace.*

Thus doth Nicander describe the Sepedon: now also we will likewise relate that which another Poet saith of the Seps, that both compared together, may appear but one, therefore thus writeth Lucan, upon occasion of one Sabellus wounded by this Serpent.

*Miserique in cruce Sabelli*

*Seps stetit exiguus, quem flexo dente tenacem  
Ausistisque manu, piloque affixit arenis.  
Parva modo Serpent, sed qua non ulla cruentæ  
Tantum mortis habet: nam plagæ proxima circum  
Fugit rapta cutis, pallentiaque ossa retexit.  
Jamque sinu laxo nudum est sine corpore vulnus:  
Membra natant sanie, iure fluxere, sine ullo  
Tegmine poples erat: semorum quoque musculi omnia  
Liquitur: & nigra distillant inguina tabe.  
Dissiluit stringens uterum membrana, flumineque  
Viscera, nec quantum toto de corpore dabet.  
Effluit in terras secum, sed membra venenium  
Decoquit: in minimum mori contrahit omnia virus.*

Which is to be Englished thus;

*On wretched Sabellus leg a little Seps bung fast,  
Which with his hand from hold of teeth he plucked away  
From wounded place, and on a pile the Serpent all agast  
He staked in sands, to him O woful wretched day,  
To kill this Serpent is but small, yet none more power hath,  
For after wound falls off the skin, and bones appear full bare,  
As in an open bosome, the heart whole body gnaweth,  
Then all his members stam in filth: corruption did prepare  
To make his flanks fall off, uncovered were knee-bones,  
And every muscle of his thigh resolved, no more did hold,  
His secrets black to look upon, distilled all Consumptions,  
The rim of belly brake out fierce, which bowels did infold,  
Out fell his guts on earth, and all that corps containd,  
The raging venom still beating members all,  
So death contracted all by little poisons main,  
Unloosing nerves, and making sides on ground to fall:  
This plague the hollow breast and every vital part  
Abstrused, where the fibres keep the life in ure,  
Did open unto death: The life, the lungs, the heart.  
O death profane, and enemy unto nature,  
Out flew the shoulders great, and arm-blades strong,  
Both neck and head gush out in matter, all doth run,  
No snow doth melt so soon the Southern blast among,  
Nor wax so fast dissolve by heat of shining Sun.  
These things which now I speak I do account but small,  
That corps should run with filthie core, may caused be by flames*

*Excites, interimens quia. fundit & ipse venenum,  
Quo fata marcentes tabes deposcunt artus,  
Indeque scicota resolutum pulch capillum  
Spargitur, & volutans candentis papuli achæne,  
Præterea fadum turpi vitiligine corpus,  
Et veluti urenti maculas à sole videt esse.*

*Let bones are shared in fire, but all away they fall,  
Of them and marrow freed, fate lets no sign remain.  
Among the Cyniph plague, this still shall bear the bell,  
The soul they take, this soul and carcase both.  
The Seps, though short it is, in fire it is a hell,  
Devouring bones, the body all undoth.*

Thus you hear that more largely expressed by Lucan of the Seps, which was more briefly touch'd by Nicander of the Sepedon, and all cometh to one end, that both kill by putrefaction. The length of this Serpent is about two cubits, being thick toward the head, but thin and slender toward the tail. The head thereof is broad, and the mouth sharp, it is of many colours, so as some have thought that it could change colour like a Chamæleon. The four under teeth are hollow, and in them lyeth the poison, which are covered over with a little skin.

Pausanias affirmeth that he himself saw one of them, and that Egyptus the son of Elatus, a King of Arcadia was slain by one of these. They live in Rocks, in hollow places of the Valleys, and under stones, and they fear no Winter, according to this verse of Pindarus.

*Hic hyemis calidus frigora nulla times.*

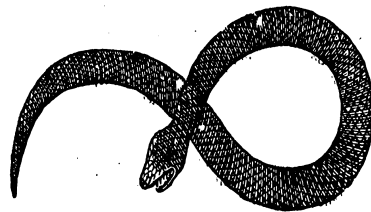
Which may be Englished thus;

*Of Winters cold it hath no fear,  
For warm it is throughout the year.*

First of all after the wound appeareth some blood, but that symptom lasteth not long, for by and by followeth matter smelling very strong, swelling tumor, and languishing pain, and all the parts of the body affected herewith become white, and when the hair falleth off, the patient seldom liveth above three or four days after. The cure hereof is by the same means that the poison of the Viper, the Ammodyte and Horned-serpent is cured withal. And particularly Aetius prescribeth a sponge wet in warm Vinegar to be applied to the wound, or else to lay the ashes of chaffe with the earth upon which they are burned, to the place, and to anoint it with Butter and Honey, or else lay unto it Millet and Honey, likewise Bay-sprigs, Oxymel, Purllain, and in their dyet salt fish.

Aristotle writeth of a little Serpent, which by some are called a sacred and holy Serpent, and he saith that all other Serpents do avoid it, and flee from it, because whatsoever is bitten by it, presently rotteth. It is in length (as he saith) a cubit, and it is rough all over, and therefore I take this Serpent to be a kinde of Sepedon. Also Aristotenus saith, that he knew a man by touching this Serpent to die; and afterward that the garment which he wore at the time of the touching of the Serpent, did likewise rot away. And thus much for the Seps and Sepedon.

Of the SLOW-WORM.



none at all, or very small. The Italians call it *Bisa orale*, and the Florentines, *Lucignola*; the Germans, *Scaliger*, *Blindschleicher*; the Helvetians, *Enviens*, *al' amolix*, and the people of Narbon, *Régals*.

It being most evident that it receiveth name from the blindness and deafness thereof, for I have often proved, that it neither heareth nor seeth here in England, or at the most it seeth no better than a Mole. The teeth are fastned in the mouth, like the teeth of a Chamæleon, the skin is very thick, and therefore when the skin is broken by a hard blow, the whole body doth also break and part asunder. The colour is a pale blew, or sky-colour, with some blackish spots, intermixed at the sides. There is some question whether it hath one or two rims on the belly, for seeing they conceive their young ones in their womb, they have such a belly by nature, as may be distended and stretched out accordingly as the young ones grow in their womb. It hath a smooth skin without all scales. The neither eye-lid covereth all the eye it hath, which is very small: about the head they are more light coloured, then about the other parts of the body: The tongue is cloven, and the top thereof very black. They are in length about a span, and as thick as a mans finger, except toward the tail which

Oswaldus.

which is more slender, and the female is more black then the male. The passage or place of excrements or conception is transverse. If they be killed with the young in their belly, the little ones will instantly creep out at their dams mouth, and sometimes (as witnesseth *Belonius*) in this little Serpent are found forty little young ones. They are in *Greece* and *England*, and come not abroad till *July*, and they go into the earth in *August*, and so abide abroad all harvest; and they love to hide themselves in Corn-fields under the ripe corn when it is cut down. It is harmlesse except being provoked, yet many times when an Ox or a Cow lyeth down in the pasture, if it chance to lie upon one of these Slow-worms, it biteth the Beast, and if remedy be not had, there followeth mortality or death, for the poyson thereof is very strong. If it swell, it is good to prick the place with a brazen bodkin, and then apply unto it Fullers-earth and Vinegar. There is a Triacle made with the Slow-worm, which smelleth like *Aqua-vitæ*; with this some men are cured of the Plague. And thus much of this little Serpent.

of the SNAKE.

**T**Here is no reasonable learned man that maketh question, that *Anguis* in *Latine* is a general word for all kinde of Snakes and Serpents, and therefore when *Virgil* writeth of the fury *Medea*, how she cast a Snake into the bosome of *Amata*, he first of all calleth it *Anguis*, a Snake, and presently after *Coluber* & *Vipera*, a Serpent, as appeareth by these verses following. *Æneid.* 7.

*Huic dea cœruleis unum de crinibus anguem  
Conjicit, inq, sinum præcordia ad intima subdit :  
Vipeream inspirans animam, fit tortile collo  
Aurum ingens Coluber. —*

Which may be Englished thus ;

be Englished thus ;  
*To her the Goddess a Snake made of the Gorgons hair,  
 Which to the bottom of her breast and entrails made to slide,  
 Inspiring to her a Vipers soul though she were fair,  
 For chain of gold an Adder bout her neck did glide.*

[illegible]

Among the ancient Pagans, Snakes were accounted the gods of the Woods, and this caused *Iris* to write this verse following;

*Pingite duos angues, pueri, sacer est locus.*

That is, O ye children, draw the figure of two Snakes, for this place, (meaning the grove of Wood) is a holy place, and sacred to the Gods. And in like sort, the Snake in ancient time was sacred to *Asclepius*, because it was thought to be without venom, and to contain in it many excellent medicines or remedies against other evils, and also a kind of divine power or help to drive away calamities. I am sure that I have read this story in *Valerius Maximus*.

medicines of remedies a *ganah* or *ganah* of medicines, whereof I remember that I have read this story in *Valerius Maximus*.  
*Rome* (which he) our City was for three years together continually vexed with Pestilence, so as neither the mercy of God could be obtained for the release of this evil, nor all wit, power, or industry of man put an end unto it. At last by the care and travail of the Priests, it was found in the writing and Books of *Sibyl*, that unless they could obtain of the *Epidaurians* the holy Snake of *Epidaurus*, there should be no end of that pestilence.  
 The Priests therefore sent to the City of *Epidaurus*, to entreat at the hands of the

For which cause there were Ambassadors sent to the City of Epidaurum, to entreat at the hands of the Citizens and Priests, that holy Bæf or Snake (as was prophane fuppofed) and fent the Snake to the end of their journey, for the Epidaurians did kindly entreat them, and fent the Snake of *Æsculapius*, and then (faith he) *Tam promptum Epidauriarum indulgentiam numen ipfius Dei fecerat, ut verba mortalium cælefti obsequio comprobavit*: That is, The very grace and power of God fuffered, that verba mortalium cælefti obsequio comprobavit: That is, The very grace and power of God fuffered, that

per favourable indulgence of the Epidaurians, and with an heavenly obsequiuſſime allowed and per-  
formed the words and writings of mortal creatures, (meaning the Sibyls writings aforeſaid) they would  
that Snake (which the Epidaurians never ſee but they worſhip, with as great reverence as they would  
Æſculapius himſelf; for it never appeareth but for their exceeding great good and commodity be-  
gan to glide about the broadest ſtreets and nobleſt part of the City, gently looking upon every body,  
and licking the earth, and ſo continued three days, to the religious admiration of all the beholders,  
bearing an undoubted aſpect and alacrity, for the obtaining and aſpiring a more beautiful habitus,  
mon: ſo at laſt it came to the liſſe near Rome, called *Tyrimis*, whereinto in the ſight of all the Mun-  
ici it did aſcend and enter, and lodged it ſelf round in that place, where ſtandeth the houſe of *Pen-  
tus Optumus*: which ſtory is thus moſt excellently followed by *Ovid* in his *Metamorphoſ.*

The falk of Rome came thither all by heaps, both men and wives,  
And kepe the Nimis that keep the fire of V'falia as their liues  
To meet the God, and welcome him with joyful noise : and as  
The golley rowed up the stream, great shoals of incense was  
On altars burnt on both the banks, so that on either side,  
The flaming of the Frankincense, the very ayre did hide,  
And also slain in Sacrifices full many catholyed.  
Anna came to Rome, the head of all the world : and there  
The Serpent lifting up himself began his head to beare  
Right up along the map, upon the top whereof on his  
He looked round about a meet abiding place to spie :  
The Tyber doth divide it self in twain, and doth embrace  
A little Isle Tretima, far so the people learn the place,  
From either side whereof, the banks are distant equal space :  
Apollo's Snake descending from the sky, conveyed him thither,  
And taking off his heavenly Drape, as one repeating thither,  
To bring our City healthfullnes, did end our sorrow quite.

Thus saith *Ovid*: But the truth is, that the Poet did but feign this thing for the excitation and stirring up of the mindes of men to Religion and religious worship of the Heathen Gods; and therefore this Snake of *Epidaurum* was but a fiction, and therefore in the beginning of the History he maketh it to be *Aesculapius* in the likeness of a Snake, for in a vision he sheweth how that *Aesculapius* appeared to the *Roman* Ambassador, and told him that he would appear in that form, saying;

Pone metus, veniam, simulachraq; nostra relinquam;  
Hunc modo Serpentem, baculumq; neribus ambo,  
Perspice & usq; nota, visam ut cognoscere possis;  
Veritas in hunc, sed major ero, tantusq; videbor,  
In quantum verti cœlestia corpora possunt.

Which may be Englished thus :

*Fear not, for I will come and leave my shrine.  
This Serpent which doth wreath with knots about this staffe of mine,  
Mark well and take good heed thereof, for into it transformed will I be,  
But big too I will be, for I will seem of such a size,  
As wherein may celestial bodies turn suffice.*

But all Poets are so addicted to fawning, that I my self may also seem while I imitate them, to set down fables for truth: and if ever there were such a Snake as this, it was Diabolical, and therefore in nature nothing to be concluded from it, and in that place of *Rome* called *Biremis* and *Trivimis*, was *Æsculapius* worshipped. And at this day in the Gardens called *S. Bartolomew's-Garden*, there is a Marbleship, on the side whereof is the figure of a creeping Snake, for the memory of this fact, as wretched *Gyalde*.

But in the Emblems and documents of the ancient Heathen, it is certain that *Æsculapius*, and the Snake and the Dragon, did signify health, and from hence it came to have the name of the Holy-snake, and also to be accounted full of medicine. The true occasion in nature, was for that about the Countries of *Bononia* and *Padua*, they have a Snake which they call *Biffe*, and *Biffe-ancie* (sense, and about *Padua*, *Atecia*, which they say is harmless. And as well children as men, do often take the time into their hands, with no more fear and dread then they would do a Coney, or any other tame and meek creature.

By the relation of *Pellinus*, it is in length five spans and five fingers, the head also compared with the body, is long, and in the neck thereof art two blanches, and betwixt them a hollow place, the back part whereof is attenuated into a thin and sharp tail, and upon either clasp they have many teeth, which are sharp, and without poison; for when they bite, they do no more harm then fetch blood only, and these men for veneration like wear about their necks; and women are much terrified by them in the hands of wanton young boys. The back of this Snake, (as writeth *Erytus*) is blackish, and the other parts green, like unto Leeks, yet mixed with some whitenesse, for by reason it feedeth upon herb, it beareth that colour. They are also carried in mens bosoms, and with them they will make knots. For the same *Erytus* affirmeth, that he saw a Fryer knit one of them up together like a garter, but when he pulled it harder then the Snake could beare; it turned the head about and bit him by the hand, so as the blood followed, yet there came no more harm, for it was cured without any medicine, and therefore is not venomous.

In the Mountain of *Mauritania* called *Zio*, the Snakes are so familiar with men, that they wait upon them at dinner time like *Cats* and little *Dogs*, and they never offer any harm to any living thing, except they be first of all provoked. Among the *Pygmies* inhabiting the *Pyrenes*, there be Snakes four foot long, and as thick as a man's arm, which likewise live continually in the houses, and not only come peaceably to their table, but also sleep in their beds without any harm, in the night-time.



was found by *Clydeus* to carry one of these about him, he was by the Emperors commended  
put to death.

But to leave vanities, we will prosecute the true and natural description of their eggs in this  
manner: They are round and soft, in colour white, cleaving (as we have already said) together in  
great bunches, forty, or fifty, or a hundred in a cluster, without they are covered with a skin or ruten,  
much harder and whiter than the substance contained within it, which is like matted; or the rotten  
Eggs of a Hen or Duck, in quantity as big as Bullies, Plums, and seldom bigger, being most com-  
monly very round and orbicular. Yet *Gesner* reporteth, that he had one sent him of the proportion  
of a Lentil, and as great as the fist of a Man, and within every egg appear certain small things, like  
the tails of Serpents, or Leaches, being in number ten, five greater and five smaller, one folded or  
lapped within another. And these have also little pustules upon the skin or crust, whereof one doth  
not touch the other.

Out of these Eggs come the young ones, but I cannot affirm what great affection the old ones  
bear unto them, or that when many Snakes lay their eggs together every one in that multitude  
hath skill to discern her own Eggs from the other. For I have been with other my Colleagues or  
School-fellows when I was young, at the destruction of many thousands of them, and never per-  
ceived that the old Snake did with any extraordinary affection fight for their eggs, but rather fore-  
took them, and suffered us to do with them what we pleased: which sometimes we broke,  
sometimes scattered abroad upon the dunghill out of which we digged them, and sometimes  
we cast them into the next River we came at, but never saw any of them recollected again to  
their former place by the Snakes, although the place were very full of them, and therefore I conclude  
for mine own experience, that Snakes cannot be perceived to bear any exceeding love in nature to  
their eggs or young ones.

Their ordinary food for the most part, is earth, Frogs, Worms, Toads, and especially Paddocks,  
or crook-backed Frogs, Newts, and small fishes. The Foxes and Snakes which are about the Ri-  
ver *Nilus* are at continual variance, and besides, the Harts are by nature common enemies to all  
Serpents.

They are not in venom inferior to other Serpents, for they infect the waters near to houses, and  
are many times the causes of diseases and death, whereof the Physicians cannot discern: When they  
bite or sting, there followeth extrem pain, inflammation, greenesse or blacknesse of the wound, dis-  
tillation in the head, and death within three days. Whereof dyed *Phylodites*, General of the Fleet of  
*Greece*, in *Lemnos*, *Dadalus* and *Mandalippus*.

The cure of this evil must be by Origan stamped and laid to the sore with Lie and Oyl, or ashes of  
the root of an Oak with Pitch, or Barley-meal mixed with Honey and Water, and sod at the fire.  
And in drink take wilde Noseswort, Daffadill flowers, and Fennel-seed in Wine. And it is also said,  
that a man carrying about him the Liver of a Snake, shall never be bitten by any of that kinde. And  
this Liver is also prescribed against the Stone in the Bladder, being drunk in strong drink: And  
thus much for this Serpent.

## Of Spiders and their several sorts.

And first of those that are commonly called PHALANGIES.

Doctor Bon-  
ham's discourse  
of Spiders.

This kinde of venomous creature, of the Latines is called *Araneus*, or *Aranea*, and of *Cicero* in  
his Books *De natura Deorum*, *Araneida*, and *Araneolus*. Of the *Grecians*, *Arachne* or *Arachna*. *Pli-*  
*nus* termeth it *Sitike*; the Hebrews name it *Acobitha*, *Achar*, *Acobith*, and *Semomith*; the *Arabs*,  
*Sibith*, and *Phibith*; in the German tongue *Spin*, and *Spiker*; in English, *Attoreo*, *Spider*, and *Spin*;  
of the *Brabanders*, *Spinne*; in France, *Araigne*; in Italy, *Ragno*, and *Ragnia*; in Spain, *Arana*; of the  
*Polonians*, *Pajak*, and *Pajecino*; of the *Bohemians*,  
*na*; of the *Illyrians* it is called *Spawank*; of the *Polonians*, *Pajak*, and *Pajecino*; of the *Bohemians*,  
*na*; of the *Barbarians*, *Koatan*, and *Kersinat*. *Isidore* in his twelfth Book saith, that the Spider is  
termed *Araneus*; because she is both bred and fed in the air: but herein he hath fallen into a do-  
le error. For if they lived only in the air, and by the air, as he would seem to enforce, it would be  
what end and purpose they should so busily make and pitch their nets for the ensnaring of flies? And  
if they receive their first being and breeding in the air, I cannot see to what purpose they do either  
lay eggs, or exclude small little Worms after their coupling together.

But we will easily pardon this presumptuous Etymologist, and dive deep into Interpretations  
with others also of the same humor, whose ordinary custom thus to dally and play with words, is  
with them esteemed as good as Statute-law, for the most part. There are many sorts of Spiders, and  
all of them have three joyns a piece in their legs.

*Estque, caput minimum toto quoque corpore parvum esse.*

*In latere oculi digitis pro cruribus habent.*

*Latere venter habet, de quo tamen ille remittit*

*Stamina.*

Which may be Englished thus;

*Little is their head, likewise the body small,  
All over is, and fingers thin upon the sides,  
In stead of legs, out of the bellies flank do fall:  
Tet out of which she makes her web to glide.*

All Spiders are venomous, but yet some more, and some lesse. Of Spiders that neither do nor  
can do much harm, some of them are tame, familiar, and domestical, and these be commonly the  
greatest among the whole pack of them. Others again be meer wilde, living without the house  
abroad in the open air, which by reason of their ravenous gut, and greedy devouring maw, have pur-  
chased to themselves the names of Wolves, and hunting Spiders. The least sort of these weave no  
webs at all, but the greater beginneth to make a small and harsh web about hedges nigh unto  
the earth, spreading and setting the same abroad in the very entry, and in void places near their  
lurking holes, their deceitful nets, observing very diligently the stirring of their deceitful webs,  
and perceiving them moving, though never so lightly, the maketh no stay, but with all speed  
possible hasteneth her self to the place, and whatsoever she there findeth, she seizeth upon as her law-  
ful prize.

The most dangerous and hurtful Spiders are called *Phalangia*, if they bite any one, (for they never  
strike) their poison is by experience found to be so perillous, as that there will a notable great swell-  
ing immediately follow thereupon. These kindes of venomous Spiders, are of two sundry sorte,  
for some of them are lesser, and some greater. The lesser sort are very unlike one to another, and  
of changeable colours, violent, libidinous, hot, stirring, sharp-topped, holding on their pace and  
way, as it were in jumping manner or leaping-wise: and these I finde to be called by *Aristotle* in his  
11. Book *De Animal*. *Pulsar*, or *Pulicer*, and *Pithei* or *Simii*. Of some they are called *Oribates*, because  
they are usually found among Trees that grow upon Mountains. They are also called *Hypostomi*, be-  
cause they live under the leaves.

The *Phalangium* or *Phalangis* Spider, is unknown in *Italy* (as *Pliny* saith) and there are found many  
sorts of them. One sort of them is very like unto a great Pismire, but much bigger, having also a  
red head, but all other parts are black, speckled, and garnished with many white spots running all  
along their bodies. This formicarian or Pismire-like *Phalangis*, of *Actius* is described to have a body  
much resembling foot in colour, his neck ash-coloured, and his back glittering, as it were with ma-  
ny hairs on it. *Nicander* calleth it *Agrotes*, and *Actius*, *Lucas*. The Latines term it *Venator*; that is,  
the Hunter. This fingeeth but weakly, without any pain at all, but yet it is somewhat venomous,  
though not very much. This kinde of *Phalangis* is often found among Spiders webs, where (af-  
ter the fashion of some Hunters) they beguile and intrap Flies, Gnats, and Bees, Gad-flies  
and Wasps. And (if *Longerus* write no more then may be warranted for truth,) those great  
Horse-flies or Ox-flies and Brimblees, that in Summer season vex Cattle, and whatsoever they lay  
their clowthes on, that they hold fast and destroy; and thus live they by taking of booties and  
preys.

There is no man (I think) so ill advised, that will confesse this to be the same creature which *Ari-*  
*stotle* calleth *Pulex*, for the body of that by his description is broad, rowling, round, and the parts  
about the neck have certain lines or cuts: and besides, about the mouth there appear and seem to  
bud forth three eminencies or standings out.

There is another sort of *Phalangium*, called by *Nicander*, *Rax*, of *Actius*, *Ragion*, of *Eliauus*, *Rbox*, (be-  
cause it is so like the kernel or stone that is found in Grapes,) and this kinde of Spider is of a round fi-  
gure, black in colour, the body glittering, and round as a ball, with very short stumped feet, yet never-  
theless of a very swift pace. They have teeth, and their mouth is nigh their belly, and when they stir,  
they gather up their feet very round. In the description of this Spider, *Actius*, *Eliauus* and *Pliny* do  
wholly consent and agree in opinion, and yet *Eliauus* was a little besides the way, when he set down  
*palm macrurus*, for *micrurus*, long feet for short feet; and that this kinde of Spider was only found in *Ly-*  
*bie*, and not elsewhere.

This kinde of Spider termed of *Pliny*, *Asterion*, seemeth to be all one with the former, saving that  
this is more known by his little white spots made star-wise, and the glittering stripes or rays where-  
with his body seemeth to be over-sprinkled. *Pliny* only mentioneth this, as if *Aristotle*, *Actius*, *Galen*  
and *Asterion*, had never heard of it.

The most venomous and hurtful of all these, is that which *Nicander* calleth *Pedernis*, of  
colour azure, or bright blew, which hath long, high, and lofty feet on both sides of the  
body. The Scholiast addeth *Dasu* and *Meteoron*, that is, *lanuginosum* and *sublime*, soft like cotton or  
Wool, and lofty or high, and not *sublime lanuginosum*, as *Longerus* translateth it. *Pliny* saith, that  
this Spider hath a black mofiness or soft down, although it will scarce sink into my head, that  
any Spider that is of an azure or blew colour, hath any soft hairs, or woolly substance of a black  
colour.

There is another kinde of *Phalangium* Spider called of *Nicander*, *Dysderis*, which name is neither  
to be found in *Aristotle*, *Pliny*, nor *Actius*, nor yet in any other ancient Author that ever I could read,  
which some others call, and that very properly, *Sphexion*, quasi *vestigium*, because it is so like a  
red Wasp, saving that it lacketh wings, and this Wasp-like Spider is of a palling deep red  
colour, and counted far worse then the blew Spider, although the azure or blew Spider only by  
touching













[illegible][illegible]

quench her thirst with that or iair.

Having thus thinly supped, she called for her Chamber, where they shewed her to climb up a Ladder, (you would have taken it to have been the seas Ladder) and behinde a corner there was provided a bed fluffed with good Wheat-chaffe in stead of Down, to harden her hide, and under her head a hard Oken-logge, with the Winnow-cloth, and the one end of an old Hop-bag, cut over in stead of a Coverlet, (for the poor man and his wife, thought that none but the Lord of the Town, and women in child-bed used Pillowes.) But *Podagra* not knowing how to mend the matter, groaned and made a lamentable noyfe, and fetchng a thousand sighes she couched her self down. But als what ill rest the poor heart took that night, and how ill her soft and tender limbs agreed with such cold cheer and entertainment, I referre my self to your secret thought. So soon thereafteross the day began to break, she started up, and the Spider and she met together again at the appointed time and place: and first of all the Spider began much to complain of the incivility of the rich Chuffie his host the Citizen. *Podagra* contrary-wife found as much or more fault with the short and sharp commons, thin diet, miserable poverty, and indigency of his poor, bare and lean holl, shewing her black and blew marks and prints, into whose tender skin the boards and planks had made a deep impression. For which cause, being both much discontented, after the matter was thoroughly debated betwixt them two, they determined and resolved within themselves, that the night following they would change Hostes and Innes, that is, that the Spider should enter into some poor Cottages, or houses of poor men, and *Podagra* should bend her course unto Noble and great mens houses, to Kings Courts, and Princely Palaces, to see what good was to be done there. So *Podagra* not being unmindfull of her word, went with a fine and Snail-like pace to the house of a certain fat, rich, and well monied man; and quietly laid herself down at the feet of this corlie Sire: which as soon as the gentle Host cast an eye upon, it is strange to tell with what mildenes, with what allurements and gentle intreaty, with what promptitude and secrecy she was welcomed; they prepared soft pallats of Down for her to lye upon, the Bedlides and the Settles whereon she should rest, were covered with Pillowes, soft Cushions, and Carpets of *Perfia*, the Kitchen smokes, and all things are in a readinesse to give her a most friendly welcome. According to the words of the Poet, where he saith;

*Jam dapibus mensas onerant et pocula ponunt.*  
In English thus;  
*Spread are the tables, and laded with store  
Of delicates, the Cups filled, could receive no more.*

Briefly, he was in all points for person and provision such a one as *Chaucer* in his works describeth his *Franklin* to be: W. H. W.

White was his beard as the Duffie,  
And of complexion he was feline;  
Well loved he by the morrow a sop in wine,  
To live in delight was ever his won,  
For he was Epheorus son foin,  
That held opinion that plain delight,  
Was very felicity parfit.  
An boultolder and that a great was he,  
Saint Julian he was in the Countree;  
His bread, his ale, was always after one,  
A better steamed man was never none.  
Without bake-meat was never his house,

Of fish and flesh, and that so plentiful,  
It served in his house of meat and drink,  
Of all dainties that men could think,  
After the hungry seasons of the year,  
So changed he his meat and his suppers.  
Full many a fat Patrick had in his maw,  
And many a beam, and many a Lucie in sin.  
Woe was his Cooke, but his service ever true  
Foynted and sharp, and ready all his ere.  
His table d'urban in his Hall away,  
Stood ready covered all the long day.

Nay, hither they brought fat and crammed Capons, Pheasants, Quails, Turtle-doves, Larks, and Nightingals. I passe over Turbot or Byrr, Gilt-heads, Sturgeon, Salmonds, Soals, and the like, for they were not unfurnished of all these, and of other flocks of shell-fish, as Lobbers, Crevishes, Oythers, and whatsoever the Sea yielded that might by love or money be purchased: for I will not speak of a great number of River-fish and Foulst that are to be had about *Petersbourg, Whitesey-mare*, and those Feminish Countreys, for thither he sent his peopledo purvey for him all that was rare and dainty. Here was Red-wine, White, Claret, Mulcadell, Rhenish, sweet-wines, harsh-wines, wine of *Fetrum*, of the Islands of *Creta, Cbio, Malure*, and those that are called *Baharr*, lying neerer unto the Coast of *Spain*.

To speak nothing of their rear-uppers, their fine Marchpanes, and curious Confections, made with sundry devises, and exquisite skill of the Apothecary. And to conclude, there was no wanton fare unfought for, no delicate Juncate, no curious trimming and pickeneesse that might gratifie, no fair words, and pleasant enticements fit to draw and allure, nor no delectation whatsoever omitted, that might seem to please this great Lady *Polydora*, (for you must understand she was none of the courtier sort of Ladies; whereof there be many now adaise, for all men know she was a Gentlewoman born, both by the fathers and mothers side, as being the daughter of *Baccibus* and *Vernum*;) and all this, it says, was done to please both her; and her two sweet Sisters, *Chitragra* and *Congra*, a pox take them all three, and so: it will let them go, and come to the Spider; who likewise being directed by some favourable Planet, boldly and luckily trudged to the poor mans house.

————*Atque ibi miro*  
*Dogmate, quidvis matrem decet, decetque maritum*  
*Addoce, atque suo sese sudore saginat.*  
 Which may be Englished thus;  
*And there by strange instructions and documents,*  
*She teacheth male and female how to live,*  
*That is, both man and wife how to increase their rents,*  
*Whilst she, on her own sweat and fat doth thrive.*

But some men may here object and say, I see here no such great blessings of Lady Fortune, more then besides a bare commendation, and good hap in this their exchange of lodging and lodgers. Yes surely, very much, not only because she spendeth her dayes more freely and safely from danger, but also because as out of a high watch-tower, she no longer beholdeth in the houses of poor persons, lavish and needlesse prodigality, banquettings, quaffings, rioting, plays, dancing, dicing, and whoring, and a thousand vanities and villanies besides, whereof she knew her self conscious, and a privy witness unto, whilst she lived in the Halls and Bowers of the rich and wealthier sort; who when they had thrust clean from house and home, and for ever banished the Spider, (the true School-mistresse of industry and frugality) straightwayes the lazie Gowt called *Podagra*, afflicted them. Had it not been better for them (think you) to have granted a dwelling place to a serving, wise, prudent, and harmlesse little creature, then to have given entertainment to such a base, blockish companion and guest as the Gowt is? Let not therefore, rich, covetous men wonder, if many times they are tormented with this fore grief, sic they will neither admit true Physitian nor physick. I mean, travail diligence, industry, moderation, and pain-taking, with the like.

Now to touch the rich and rare gifts and graces of the minde, and other noble qualities and dispositions of Spiders, I know not whether I should first begin with the commendation of their prudence, justice, fortitude, temperance, their *Philanthropia*, *Philoponia*, *Autarkia*, their humanity and love towards men, their dindustrious industry and love of labour, their contentation as having sufficient, and coveting no more than is allotted unto them. Their wittinesse, policy, quicknesse and sharpnesse of sense, their cleanly peacelove, with many other vertues, or else her admirable cunning and skilfulnesse in their weaving trade. Their prudence, sagacity, and wittinesse to conjecture things future, appeareth in this one thing, that when great abundance of rain, floods, swelling and overflows of Rivers, are like shortly to come to passe, and thereby to threaten houses, they then begin to build their Webs higher by a great deal, then their usuall custome heretofore hath been. And this is another proof of the same, in that they weave not at all in a clear Sun-shine day.

Xxx



























Aristotle.

Aristotle.

Livy.

greater, but in their wrath their eyes flame, they turn their tails and put forth their double tongue. In the winter-time as we have said already, they live in the hollow Rocks, yet Pliny affirmeth, that then also they enter into the earth, and become tractable and tangible by the hands of man, for in the cold weather they are nothing so fierce as they are in the hot, and in the Sommer also they are the cold weather they are nothing so fierce as they are in the hot, and in the Sommer also they are not at all times alike furious, but like to all other Serpents. They are most outrageous in the Canicular daies, for then they never rest, but with continual disquiet move up and down till they are dead or daies, for then they never rest, but with continual disquiet move up and down till they are dead or daies, for then they never rest, but with continual disquiet move up and down till they are dead or

*Cum durum fugiens morsu ignescens ebulliens  
Frenit ecclis, vel ubi servente libidine assu  
Sevo dente sui refecat caput illa mariti:  
Ast ubi post vegetam ceperunt pignora vitam,*

*When the male Viper gnaweth, avoiding females bites;  
Whose fiery rage is all on ardent lust,  
Yet when he burnes for copulation right,  
Her cruel tooth doth Husband head off cruell.*

*Jam propinqua adsunt maturi temporis annus,  
Indignam chari mortem ulciscens patri,  
Eroja misera nascuntur matris ab alio.*

*In English thus;  
But yet alas, when seeds begins to live,  
And birth of young ones ripen in her womb,  
Then they for Fathers death a full revenge do give,  
Eating forth their wretched mothers fruit.*

Vnto this agreeeth Galen, Isidore, Plutarch, Elianus: and Lucan who writeth;

*Viperei coeui abrupto corpore macti  
That is to say:  
The engender of Vipers blood  
Engender, breaking bodies good.*

Pliny agreeeth with the residue for the death of the Male in carnal copulation, but he differeth in this, about the Female, affirming that when the young Vipers grow ripe and perfect in their Mothers belly, she calteth forth every day one for three daies together, (for her number is sometimes twenty) at last the other, impatient of delay, gnaw out her guts and belly, and so come forth, destroying their mother: And here is no great difference, for in the sum and destruction of Father and Mother they all agree, and Saint Jerom, Saint Basil, and Horn do agree and subscribe to the truth of these opinions. Thus we have shewed the opinions of the Ancient and first Writers: now it followeth that we should likewise shew the opinions of the latter Writers, which in his time were with as great brevity and peripatency as I can. Plerum therefore writeth, that in his time there were Learned men desirous to know the truth, who got Vipers, and kept them alive, both Males and Females, by shutting them up safe where they could neither escape out, nor do harm, and they found that they engendered, brought forth, and conceived like other Creatures, without death or ruine of Male and Female.

Amatus Lusitanus also writeth thus. The Male and Female Viper engender by wreathing their tails together, even to the one half of their body, and the other half standeth upright, mutually killing one another. In the Male there is a genital member in that part beneath the Navel, where they embrace, which is very secret and hidden, and against the same is the Females place of conception, as may appear manifestly to him that will look after the same; and therefore all the Philosophers and Physicians have been deceived, that have wrote they have conceived at their mouth, or that the Male perished at the time of engendering, or the Female at the time of her delivery. Thus saith Amatus.

Theophrastus he likewise writeth in this manner; The young Vipers do not eate out their way, or open with their teeth their Mothers belly, nor (if I may speak merrily) make open their own passage by breaking up of the doors of their Mothers womb, but the womb being narrow, cannot contain them; and therefore breaketh of it own accord: and this I have proved by experience, even as the same falleth out with the fish called *Aeui*: and therefore I must crave pardon of Herodotus, if I affirm his relation of the generation of Vipers to be merely fabulous. Thus far Theophrastus.

Aristotle.

Apollonius also writeth, that many have seen the old Vipers licking their young ones like other Serpents.

Thus have I expressed the different judgements of sundry Authors both new and old touching the generation of Vipers, out of which can be collected nothing but evident contradictions, and unreconcilable judgements, one mutually crossing another. So as it is unpolleble that they should be both true, and therefore it must be our labour to search out the truth, both in their words, and in the conference of other Authors. Wherefore to begin, thus writeth Aristotle. The Viper amongst other Serpents, almost alone bringeth forth a living creature, but first of all she conceiveth a soft egge of one colour, above the egges lieth the young ones folded up in a thin skin, and some-times it falleth out, that they gnaw in under that thin skin, and so come out of their mothers belly all in one day, for the bringeth forth more then twenty at a time.

Out of these words of Aristotle, evilly understood by Pliny and other ancient Writers, came that error of the young Vipers eating their way out of their mothers belly, for in stead of the little error which Aristotle saith they eat thorough, other Authors have turned it to the belly, which was clean from Aristotle meaning. And another error like unto this, is that wherein they affirm, that the Viper doth every day bring forth one young one, so that if she hath twenty young ones in her belly, then also she must be twenty daies in bringing of them forth.

The words of Aristotle from whence this error is gathered, are these, *Tetati de enia emera katbon, Tetati de plo be eikosi*, which are thus translated by Gaza, *Parit enim singulos diebus singulis, plures quam viginti numero*: That is to say, she bringeth forth every day one, more then twenty in number. But this is an absurd translation, and agreeth neither with the words of Aristotle, nor yet with his mind, for his words are these: *Parit autem una die singulos, parit autem plures quam viginti numero*. That is to say in English, she bringeth forth every one in one day, and the bringeth forth more then twenty: so that the sense of these words shall be; that the Viper bringeth forth her young ones severally, one at a time, but yet all in a day.

But concerning her number, neither the Philosopher, nor yet any man living, is able to define and set it down certain, for they vary, being sometimes more, and sometimes fewer, according to the nature of other living creatures. And although the Viper do conceive egges within her, yet doth she lay them after the manner of other Serpents, but in her body they are turned into living Vipers, and so the egges never see the sun, neither doth any mortal eye behold them, except by accident in the dissection of a female Viper when she is with young. I cannot also approve them that do write, that one, namely the Viper, among all Serpents, bringeth forth her young ones alive, and perfect into the world, for Nicander and Grevinus, do truly affirm, with the constant consent of all other Authors, that the horned Serpent called *Cerasiter*, of which we have spoken already, doth likewise bring forth her young ones alive. And besides, Herodotus writeth of certain winged-Serpents in Arabia, which do bring forth young ones as well as Vipers, and therefore it must not be concluded with apparent falsehood, that onely the Viper bringeth her young ones perfect into the world.

The like fable unto this, is that general conceit of the copulation together, betwixt the Viper and the Lamprey; for it is reported that when the Lamprey burneth in lust for copulation, the forsaketh the waters, and cometh to the Land, seeking out the lodging of the male Viper, and so joyneth herself unto him for copulation. He againe on the other side, is so tickled with desire hereof, that forsaking his own dwelling and his own kind, doth likewise betake himselfe unto the Waters and Rivers sides, where in an amorous manner, he hiffeth for the Lamprey, like as when a young man goeth to meet and call his Love; so that these two creatures, living in contrary elements the earth and the water, yet meet together for the fulfilling of their lusts in one bed of fornication. Upon which Saint Basil writeth in this manner: *Vipera infestissimum animal eorum que serpent cum murana congeditur, &c.* that is to say, the Viper a most pernicious enemy to all living creeping things, yet admitteth copulation with the Lamprey, for he forsaketh the Land, and goeth to the water-side, and there with his hissing voyce, giveth notice to the other of his presence, which the hearing instantly forsaketh the deep waters, and coming to the Land, suffereth herself to be embraced by that venomous beast. Also Nicander writeth thus thereof in his verses.

*Fama est, si modo vera, quod haec sua pascha linquat,  
Atque eat in siccum cogente libidine litus,  
Et cum Vipereo coiens serpente gravetur,*

Which may be englished thus;

*Fame saith (if it be true) that she her seed forsakes,  
I mean the shore, and goes upon dry land,  
Where for her lust the Viper-male she takes,  
In fleshy cotture to be her husband.*

But this opinion is vaine and fantastical, as Pliny and divers others have very learnedly proved, for the Lamprey cannot live on the Land, nor the Viper in wet places, besides the waters: and therefore, besides the impossibility in nature, it is not reasonable that these will hazard their own lives, by forsaking their own elements for the satisfaction of their lusts, there being plenty of either kinds to work upon, that is to say, both of female Vipers in the Land, to couple with the male, and male Lampreys in the water, to couple with the female.

Although



Likewise the Region wherein they live; begetteth a more lively working Spirit in the Serpent, and therefore before all others, the Vipers of Numidia are preferred, because of the heat of that Country. Also their meat causeth in them a difference of poyson; for those that live in the woods and eat Toades, are not so vigorous or vënomous, but those that live in the mountains, and eat the roots of certain herbs, are more poysonful and deadly. And therefore Cardan relateth a story, which he saith was told him by a *Phœnician*, that a Mountain-Viper chafed a man so hardly, that he was forced to take a tree, unto the which when the Viper was come, and could not climb up to utter her malice upon the man, she emptied the same upon the Tree, and by and by after, the man in the tree dyed, by the favour and secret operation of the same.

*Pausanias.*

tree dyed, by the ysa vomur which haunte the Balsom-trees, I haue read, that if at any time they  
But of the Arabian Vipers which waunt the Balsom-trees, I haue read, because while they suck in  
bite, they onely make a wound like the pricks of yron, voide of poison, because while they suck in  
the juice of that tree, the acerbity and strength of the venom is abated. About the Mountain *Hellus*  
in Greece, the poison alfo of Vipers is infirme and not strong, so that the cure thereof is alfo ready and  
easie. But yet for the nature of Vipers poison, I can say no more then *Walpurg* hath said, that it is of it  
self and in it selfe considered, hot : and his reason is, because he saw a combat in a glasse betwixt a  
Viper and a Scorpion, and they both perished one by the others poison. Now he saith that it is ig-  
nored, the Scorpion to be of a cold nature, and his poison to be cold : therefore by reason of the an-  
tipathy whereby one died by the malice of another, it must needs follow that the Viper is hot, and  
her poison likewise of the same nature. For a Serpent of a cold nature, killeth not another of the  
same nature, nor a hot Serpent, one of his own kind, but rather it falleth out cleane contrary, that the  
hot kill those that are cold, and the cold Serpents the hotter.

Pliny.  
Nicander.

not kill thole that are cold, and the cold Serpents doe not kill thole that are hot. If there be any Vipers that live neere the waters, are of more mild and meek poison then others. If there be any such, but I rather beleve there be none, but that the same Author which wrote of the Vipers, is there of the water, did intend Serpents of the water. But concerning the poison of Vipers, there is no thing reported more strange then that of *Vincentius Belluacensis*, who writeth, that if a man chance to tread upon the reynes of a Viper unawares, it paineth him more then any venom, for it spreadeth itself over all the body incurably. Also it is writen, that if a woman with child chance to passe over a Viper, it causeth her to fuffer abortment; and the Mushrooms or Toade-fooles which grow neere the dennes and lodgings of Vipers, are also found to be venomous.

The Scythians also do draw an incurable and unrefutable poison out of Vipers, wherewithall they anoint the sharp ends of their darts and arrows when they goe to warre, to the end that if it chance to light upon their aduery, he may neuer any more do them harm. They make this poison in this manner. They observed the littering places and time of the Vipers, and then with strength and Art, did take the old and young ones together, which they presently killed, and afterward suffered them to lie and rot, or soake in some moist thing for a season: then they took them and put them into an earthen pot filled with the blood of some one man; this pot of mans blood and Vipers they stopped very close, so as nothing might issue out at the mouth, and then buried or covered it all over in a dunghill, where it rotted and consumed a few daies, after which they uncovered it again, and opening it, found at the top a kind of watery substance swimming, that they take off, and mixe it with the rotten matter of the Viper, and hereof make this deadly poison.

We have shewed already, that there is outwardly a difference betwixt the biting wound of the Male and the Female Viper, for after the male hath bitten, there appeareth but two holes, but after the Female hath bitten, there appeareth foure; and this is also a great deal more deadly then is the biting of the male, according to the verses of *Nicander* where he saith,

*Porro ex Vipereo quod noris germine pejor  
Fœmina : quæ veluti majori accenditur ira,  
Sic vehemente magis fert noxia vulnera morsu,*

Which may be englished thus :

But of the Vipers brood the female is the worst,  
Which as it were, with greater wrath doth burn: (curses)  
And therefore when she bites, makes bodies more ac-

Et plus gliscenti se cauda & corpore voluit,  
Vnde citatior hæc illos mors occupat artus.

*Inflicting hurtful wounds, to vehemency turnd.  
Rowling her bulke and taile more oft about,  
Whereby a speedier death doth life rid out.*

But *Auizen* is directly contrary to this opinion, and faith, that as the bitings of male *Dragons* are more extirpall and harmful then are the females, fo is it betwixt the biting of the male and female *Viper*. This contrarietie is thus reconciled by *Mercuriall*, namely, that it is true, that the wounds which the female maketh by her biting, being well considered, is more deadly then the wounds which the male giveth : yet for the proportion of the poison which the male venteth into the wound he maketh, it is more deadly then is the females : fo that with respect of quantity: they both say true which affirm either the one or the other. But which soever is the greatest, it skilleth not much, for both are deadly enough, as may appear by the common symptoms and signes which follow, and also death.

*Matthiæ* reports a history of a Country-man, who as he was mowing of grass, chanced to cut a Viper clean asunder about the middle, or some-what nearer the head, which being done, he stood still, and looked upon the dying dismembered parts a little while, at last, either presuming that it had no power left to hurt, or thinking it was dead, he took that part in his hand where-upon the head was, the angry Viper feeling his adversaries warm hand, turned the head about, and bit his

his finger with all the rage, force, and venom that it had left, so that the blood issued out. The man thus bitten for his boldness, did hastily cast it away, and began to suck the wound, putting his hand to his mouth, which when he had done but a little while, he suddenly fell down dead.

The like story unto this, is related by *Amatus Lusitanus* of another, which more boldly then wifely, did adventure to take a live Viper into his hand upon a wager of money, but as the other, so this paid for his rashnes, for the angry Viper did bite him as did the former, and he sucked his wound as did the Country-man, and in like manner fell down dead.

By both which examples, we may well see the danger of the Vipers poison, so that if once it come into the stomack, and touch the open passage where the vitall parts goe in and out, it neuer stayeth long but death followeth. Wherefore *Actius* faith well, that sometimes it killeth within the space of fewe houres, and sometimes again within the space of three daies, and that respite of time seemeth to be the longest, if remedie be not had with more effectual speed.

The signes or effects of the Vipers biting, are briefly these, first there issueth forth a rotten matter, sometimes bloudy, and sometimes like liquid or molten fatnesse, sometimes again with no colour at all, but all the flesh about the sore swelleth, sometimes having a red, and sometime a pale blew or colour upon it, issuing also forth a corrupted matterly matter. Also it causeth divers little blisters to arise upon the flesh as though the body were all scorched over with fire, and speedily followeth putrefaction and death.

The pain that cometh by this Serpents wounding, is so univerſal, that all the body ſeemeth to be ſet on fire, many pitiful noyles are forced out of the parties throat by ſenſe of that pain, turning and crackling of the neck, alſo twinkling and wrying of the eyes, with darkneſſe and heavineſſe of the head, imbecillity of the loynes, ſometimes thirſting intolerably, crying out upon his dry throat, and again ſometimes freezing at the fingers ends, at leaſt ſo as he feeleth ſuch a pain. Moreover, the body ſweating a ſweat more cold then ſnow it ſelf, and many times vomiting forth the bilious tumors of his owne belly. But the colour going and coming is often changed, now like pale lead, then like black, and anon as green as the ruſt of braſſe, the gums flow with blood, and the Liver it ſelf falleth to be inflamed, ſleepineſſe and trembling poſſeſſeth the body and ſeverall parts, and difficulty of making urine, with Feavers, neezing and ſhortneſſe of breath.

These are related by *Actius, Aegineta, Grevinus* and others, which work not always in every body generally, but some in one, and some in another, as the humors and temperament of nature doth lead, and guide their operation. But I marvel from whence *Plato* in his *Symposium* had that opinion, that a man bitten and poisoned by a *Viper*, will tell it to none, but only to those that have formerly tasted of that misery: for although among other effects of this poison, it is said that madnels, or a distracted mind allo followeth, yet I think in nature there can be no reason given of *Plato's* opinion, except he mean that the patient will never manifest his grief at all. And this howsoever all is confuted by this one story of *Grevinus*. There was (as he writeth) a certain Apothecary which did keep *Vipers*, and it happened one day as he was meddling about them, that one of them caught him by his finger, and did bite him a little, so as the prints of his teeth appeared as the points of needles. The Apothecary only looked on it, and being buffed, either forgot, or (as he said afterward) felt no pain for an hours space: but after the hour, first his finger smarted and began to burn, and afterward his arm and whole body felt to be suddenly distempered therewith, so as necessity constraining him, and opportunity offering it self, he sent for a Physician at hand, and by his good advice, (thorow Gods mercy) was recovered, but with great difficulty; for he suffered many of the former nations and symptoms before he was cured.

Therefore by this story, either *Plato* was in a wrong opinion, or else *Grevinus* telleth a fable, which I cannot grant, because he wrote of his own experience, known then to many in the world, who would quickly have contradicted it: or else if he had consented to the opinion of *Plato*, no doubt but in the relation of that matter, he would have expressed also that circumstance.

Thus then we have, as briefly and plainly as we can, delivered the pains and torments which are caused by the poison of Vipers; now therefore it followeth, that we also briefly declare the vertue of such Medicines, as we find to be applied by diligent and careful observations of many learned Physicians, against the venom of Vipers. First of all they write, that the general rule must be observed in the curing of the poison of Vipers, which is already declared against other Serpents: namely, that the force of their poison be kept from spreading, and that may be done either by the present extraction of the poison, or else by binding the wounded member hard, or else by cutting it off, if it be in finger, hand or foot.

Galen reporteth, that when he was in *Alexandria*, there came to the City a Countryman which had his finger bitten by a Viper, but before he came, he had bound his finger close to the palm of his hand, and then he shewed the same to a Physician, who immediately cut off his finger, and so he was cured. And besides the tellth of another country-man, who reaping of Corne, by chance with his sickle did hurt a Viper, who returned and did raze all his finger with her poisonous teeth. The man presently conceiving his own peril, cut off his own finger with the same sickle, before the poison was forced too far, and so was cured without any other Medicine.

Sometime it hapneth that the bite is in such a part that it cannot be cut off, and then they apply a Hen cut in sunder alive, and laid to as hot as can be, also one must first wash and anoint his mouth with oyl, and so suck out the poison. Likewise the place must be scarified, and partly fed and dieted with old Butter and bathed in milk or Seawater, and be kept waking, and made to walk up and down.

In Vipers.

It were too long, and also needlesse, to expresse all the medicines which by naturall meanes are prepared against the poison of Vipers, whereof seeing no reasonable man will expect that at my hands, I will onely touch two or three cures by way of history, and for others, refer my Reader to Physitians, or to the Latine discourse of *Cervinus*. In *Norberla*, the country of that great and famous *Genilis* who translated *Avicen*, there is a fountaine, into which if any man be put that is stung or bitten by a Serpent, he is thereof immediately cured; which *Amatus Lusitanus* approveth to be very natural, because the continual cold water killeth the hot poison. The same Author writeth, that when a little maid of the age of thirteen yeeres, was bitten in the heel by a Viper, the legge being first of all bound at the knee very hard, then because the maid fell distract, first he caused a Surgeon to make two or three deeper holes then the Viper had made, that so the poison might be the more easily extracted, then he scarified the place, and drew it with cupping-glasses, whereby was exhausted all the black blood, and then also the whole leg over, was scarified, and blood drawn out of it, as long as it would run of it own accord. Then was a plaister of Garlicke, and the sharpest Onions roasted, which being mixed with Triacle, was laid to the bitten place. Also the maid drank three daies of Treacle in wine, and four hours after a little broth made with Garlicke.

The second day after the abatement of the pain, he gave her the juyce of Yew-leaves fasting, which he commendeth as the most notable Antidote in this kind, and so made a second plaister, which lay on three days more, and in the mean time she drank fasting every day that juyce of Yew-leaves, whereby her trembling and distract edstate was abated, but from the wounded place still flowed matter, and it looked black. Then the four next daies, the said matter was drawn out by a linnen cloth, wherein was Goates dung, powder of Lawrell, and *Euphorbium* in Wine, all mixed together, and afterward he made this ointment, which did perfectly cure her. Rec: of long *Arisachii* two ounces, of Briony and Daffadil one ounce, of Galbanum and Myrrhe, of each one ounce, with a convenient quantity of oyle of Baies and Waxe. This applied to the bitten place in a linnen cloth, and rentures twice a day, did perfectly recover her health within a month.

*Ambrosius Paracelsus* cured himselfe, with binding his finger hard that was bitten, and applying to it Triacle dissolved in *Aqua vite*, and drunk up in linc or bumbast: and he adviseth in stead of old Triacle, to take Mithridate. *Gesner* saith, that he saw a maid cured of the eating of Vipers flesh, by being constrained to drink Wine abundantly. *Theophrastus* and *Asclepiades* do write, that many are cured by the found of good Musick, as the like is already shewed, in the cure of the poison of the *Phalangium*: and no marvel, for *Ismenia* the Theban affirmeth, that he knew many in *Bedia*, that were cured of the Sciatica, by hearing of the musickall sound of a good pipe.

Of the Medicines which may be made of the Viper.

The eating of Vipers is an admirable remedy against the Leprosie. And being prepared after that sort as was mentioned immediately before in the former Section, they are ministred to the sick person sitting in the sun, yet his head must be well covered or shadowed. Neither indeed to eat Vipers once alone, or twice is sufficient, but it must be done often, sith it is without danger, and moreover bringeth great commodity. And let the Vipers be new, and taken out of moist places, for those which are bred near the Sea, are very thirsty and dry. The broth also of sod Vipers, is for such persons good supping meat.

The flesh of Vipers is in temperature apparantly hot and dry, and purgeth the whole body by sweat; here-upon many fore tormented with Leprosie, by eating and drinking them have been cured.

*Averroes* saith, the flesh of *Tyrus* clenseth Leprosie, because it driveth the matter thereof to the skin, and therefore they that drink it, fall first into the passion of *Tyria*, that is, the pilling of the skin, and after are cured of it.

Chuse the Vipers of the Mountain, especially being white, and cut off their heads and tales at once very speedily, and then if the issue of blood be plentiful, and they continue alive, and wallow to and fro a long time, these are good. After their beheading, let them be made clean and sod, and let the diseased party eat of them, and of their broth.

And by the drinking of wine wherein a Viper dieth or liveth, certain have been cured accidentally, or by an intent to kill them.

The Leaper must first drink the broth of Vipers decocted, in manner as afore-said, then let him eat the flesh, no otherwise then as mutton or fowles, which daily men dine with, but fasting and in the morning this flesh must be eaten, halfe a Viper at once, and sometime a whole Viper, according to the strength of the party diseased. After the eating whereof, he must not eat or drink in the space of six houres: but if he doe sweat, it is most expedient that in his sweat he look to himselfe very carefully. And the skin is wont to flea off from the Leaper, as it usually befalleth Serpents.

A man may easily see the flesh of Vipers to be hot and dry, when they are dressed as Eels. And that they purge the whole body thorow the skin, shou mayest learne even by those things, which my self being a young man, had experience of in our Countrey of *Mysia*, which thing severally and in order I shall relate.

A certain man infected with the disease which men call *Elephas*, that is, Leprosie, for a time conversed still with his companions, till by his company and conversation, some of them were infected with the contagion of the disease, and he now became lothsome to himselfe, and filthy to sight. Building therefore

therefore a cottage for him near the Village, on the top of a bank, hard by a Fountain, there they place this man, and daily bring to him so much meat as was sufficient to sustain life. But at the ringing of the Dog-star, when by good hap, Reapers reaped not far from that place, very fragrant Wine was brought for them in an earthen vessel: he that brought it, set it down near the Reapers, and departed; but when the time was come that they should drink it, a young man taking up the vessel, that according to their manner having filled a bowl, he might mingle the Wine with a competent measure of water, he poured the Wine into the bowl, and together with the Wine fell out a dead Viper.

Wherefore the Reapers amazed thereat, and fearing lest if they drank it, they should receive some harm thereby, chose rather indeed to quench their thirst by drinking water: but when they departed thence, of humanity and in piety, gave the Wine to this Leper, supposing it to be better for him to die, then to live in that misery. Yet he when he had drunk it, in a wonderful manner was restored to his health: for all the scurf of his skin fell off as the shales of tender shelled creatures, and that which remained, appeared very tender, as the skin of Crabs or Locusts, when their outward shell is taken away.

Another example by a chance not much unlike, hapned in *Mysia*, a Countrey of *Asia*, not far from our City. A certain Leper went to wash himself in Spring-water, hoping thereby to receive some benefit. He had a maid-servant, a very fair young woman, importuned by divers luters: to her the sick man committed both certain other things pertaining to the house, and also the store-house. When they therefore were gone into the room, to which a filthy place and full of Vipers adjoynd, by chance one of them fell into a Vessel of Wine there negligently left, and was drowned. The Maid elemeing that a benefit which Fortune offered, filled that Wine to her Master, and he drank it, and thereby in like sort as he that lived in the Cottage, was cured.

These are two examples of experiment by casual occasion. Moreover, I will adde also a third, which proceeded from our imitation. When one was sick of this disease, in minde more then the common sort Philosophical, and despising death, took it exceeding grievously, and said it were better once to suffer death, then to live so miserable a life: and drinking Wine so mingled with poison, he became a Leper: and afterward we cured his Leprosie by our accustomed medicines.

Also a fourth man took Vipers alive, but that man had only the beginning of this disease: therefore our care and industry was very speedily to restore him to health: wherefore having let him blood, and by a medicine taken away melancholy, we bad him use the Vipers he had taken, being prepared in a pot after the manner of Eels. And he was thus cured, the infection evaporating through the skin.

Lastly also, a certain other man very rich, not our Country-man, but of the middle of *Thracia*, admonished by a dream, came to *Pergamus*, where God commanded him by a dream, that he should daily drink the medicine which was made of Vipers, and outwardly he should anoint his body, and not many days after, his disease became the Leprosie: And again also, this infirmity was afterward cured by the medicines which God commanded.

*Melissus Grady* fed Chickens and Capons with the broth and flesh of Vipers mingled with bread, *Galen* till they call their feathers, purposing by them to cure the Leprosie.

A certain Noble-woman in this City, infected with this malady (the Leprosie) after divers infortunate attempts of many, came to my hands, in whose cure, when generous medicines availed nothing, at last, with consent of her husband, I purposed to try her with Vipers flesh: whereupon a female Viper being cleansed and prepared after that sort as *Galen* prescribeth in his Book *De Theriaca*, mingling the flesh of the Viper with Galangal, Saffron, &c. I sod her very well: then I took a Chicken, which I commanded well to be sod in the juyce and broth of the Viper. And lest she should take any harm thereby, I first ministred unto her Mithridate, then the Chicken with the broth, by eating whereof she said she felt herself better: Which when I saw, I took another male Viper, whom I sod alone without adding any other thing, and the broth thereof I ministred to her three days, whereupon she began to sweat extremely, the sweat I restrained by syrup of Violets and pure water. After six days, scales fell from her, and she was healed. Moreover, she soon after conceived a man-child, having been barren before the space of forty years.

*Antonius Musa* a Physician, when he met with an incurable Ulcer, he gave his patients Vipers to *Pliny*, eat, and cured them with marvellous celerity. When the servants of *Craterus* the Physician fell into a strange and unusual disease, that his flesh fell from his bones, and that he had proved many medicines which profited him nothing, he was healed by eating a Viper dressed as a fish.

Vipers flesh if it be sod and eaten, cleareth the eyes, helpeth the defects of the sinews, and represseth swellings.

They say they that eat Vipers become lousie, which is not so, though *Galen* affirm it. Some adde *Dioscorides* them to live long who eat that meat, to wit, Vipers. *Ippocras* affirmeth the *Cirmi*, a kinde of Indians, to live an hundred and forty years. Also he thinketh the *Ethiopians*, and *Seres*, and the Inhabitants of Mount *Ambu* to be long lived, because they eat Vipers flesh.

The *Seythians* cleave the head of the Viper betwixt the ears, to take out a stone, which they say *Pliny* the devoureth when she is affrighted.

The heads of Vipers burnt in a pot to ashes, and after beaten together with the grossest decoction of bitter Lupines, & spread as an ointment on the temples of the head stayeth the continual rheume of the

the eys. Their ashes lightly beaten alone, and applyed as a dry medicine for the eys, greatly amendeth a dim sight.

The head of a Viper kept dry and burned, and after being dipped in Vinegar and applyed, cureth wilde fire.

The gall of the Viper doth wonderfully cleanse the eye, and offendeth not by poyson. It is manifest against the stinging of all Serpents though incurable, that the bowels of the very Serpents do help and avail; and yet they who at any time have drunk the liver of a fod Viper, are never stung of Serpents.

The fat of a Viper is effectual against the dimnesse and suffusions of the eyes, mixed with Rosin, Honey-atrick, and a like quantity of old Oil.

For the Gowt they say it availeth much to anoint the feet with the fat of Vipers. Vipers fat healeth them that are burned.

The flow of the Viper cureth the Ring-worm. The skin of the Viper beaten to powder, and laid upon the places where the hair is fallen, it doth wonderfully restore hair again.

Some extend and dry whole Vipers, and after beat them to powder, and minister them in drink against the Gowt. Others about the rising of the Dog-star, cut off the head and tail of Vipers, and burn the middle, then they give those ashes to be drunk 21. days, so much at a time as may be taken up with three fingers, and so cure the swelling in the neck. Joynts pained with the Gowt, are profitably anointed with Oyl wherein a Viper hath been sodden, for this cureth perfectly.

The making of the Oyl of Vipers, is described in these words; Take three or four Vipers, cut off their extreame parts, the head and the tail, in length four fingers, divide the rest into four goblets, and put them in a pot open above and below, which pot must be put into another greater pot; then the mouth of them must be well shut with clay, that they breath not forth; then put them into a Caldron full of seething water, and there let them continue boiling two hours in those pots; then will distill a liquor from the Vipers, which were in the pot open above and below, with that Oily liquor anoint the members of the party molested with the Palsie, for by a secret property it cureth the grief of that disease.

#### Of Triacle and Trochus of Vipers.

*Theriac* or *Triacle*, not only because it cureth the venomous biting of Serpents, but also because the Serpents themselves are usually mingled in the making thereof, fitly is so named of both significations. Here also we will infer something concerning *Trochus* of Vipers, which are mingled in the making of *Triacle*.

*Triacle* is very ancient, and hath always very carefully, and not without ambition, been refined by the Physicians, till *Andromachus Nero* his Physician, added the flesh of Vipers, as the full accomplishment of this drug. The flesh of Vipers alone is mingled in *Triacle*, and not the flesh of other Serpents, because all the rest have something malignant more than Vipers. Vipers are thought to have lesse poyson in them than other Serpents.

Vipers for *Triacle* must not be taken at any time, but chiefly in the beginning of the Spring, when having left their dens, they come forth into the Sun-shine, and as yet have not poyson much offensive.

Take female Vipers, for we must take heed how we take male Vipers for the confection of Antidotes. For *Trochus* all Vipers are not convenient, but those which be yellow, and of the yellow, the females only.

Vipers great with young you must refuse, for being pregnant, they are more exasperate than themselves at other times.

Of Vipers be made *Trochus*, which the *Grecians* are called *Theriaci*, four fingers being cut off at either end, and the inwards taken out, and the pale matter cleaving to the back-bone: the rest of the body must be boiled in a dish in water, with the herb *Dill*, the back-bone must be taken out, and fine flowre must be added. Thus these *Trochus* being made, they must be dried in the shade, apart from the Sun-beams, and being so prepared, they be of very great use for many medicines.

The use of *Triacle* is profitable for many things, for not only by his own nature it availeth against the biting of venomous creatures and poysons, but also it is found by experience, to help many other great infirmities. For it easech the Gowt and pain in the joynts, it dryeth fluxes, it very much profiteth men molested with the Dropsie, leprous and melancholick persons, those that have *Quartane Agues*, or the Jaundise, those that have a weak voice, or that spet blood: those that are troubled with aking reins, with Dysentery, with the stone, with short breath, with passion of the liver or milt, with cholera, with heart-ach, with the Falling-sickness. It driveth all kinde of Worms out of the bowels. It is the most sovereign remedy of the Plague.

Even to them that are in health the often use of it is wholesome, for it promiseth long life, and firm health; it consumeth excrements, it strengtheneth natural actions, it quickeneth the wit, and sharpeneth all the senses; it preserveth the body from poyson and other offences, and maketh it scarce subject to danger by such casualties; it begetteth good blood; it corrupteth the air, and waters; neither alone doth it deliver from instant diseases, but also preserveth from those that be imminent.

#### OF EARTH-WORMS.

Although there be many and sundry sorts of Worms which do contain in them some poysonous Doctor Bon- wherof some are bred only in the earth, and others among plants, and in the bodies of living creatures. Worms of the earth are termed by *Plautus* and *Coluella Lumbri*, peradventure as being derived *a Lumbitate*. They are called also *Terra Intestina* of the *Latines*, as well because they take their first beginning and breeding in the very bowels and inward parts of the Earth, as because being pressed and squeezed betwixt the fingers or otherwise, they do void forth excrements after the fashion of living beasts that have intrails in them. The *Greeks* call them *Gegetera*; *Hesychius* calleth them *Emballus*; *Brusellus Olibo* in his *Physick Lexicon* writeth, that they are usually called in the *Cilician* tongue *Gaphagos*, fetching the derivation of the word *para To gain phagein*, for they feed upon earth.

Of the Englishmen they are called *Meds*, and *Earth-worms*; of the *French*, *Vers de Terra*; of the *German*, *Ert wurm*, and *Erdwurmem*, *Melet*, *Ode Regenwurm*; of the *Belgians*, *Pier-wurm*, or *Kengenwurm*; of the *Italians*, *Lumbriobi*; of the *Spaniards*, *Lumbrices*; of the *Polonians*, *Glisti*; of the *Hungarians*, *Galizga*; of the *Arabians* they are called *Charatin*. *Marardus* in his second Book and 40. Epistle writeth, that in times past they were called *Onisculi*, and *Nisculi*.

There are found especially two sorts of Earth-worms, which are either greater or lesser. The greater Earth-worms are somewhat long, almost like in proportion and shape to those round Worms which do breed in mens bodies. They are half a foot long at least, and being stretched out in length they are found to be a foot long, they are of a whitish colour, and sometimes though seldom of a bloody hue: and for the most part they are all adorned with a chain about their necks, or rather they seem to wear a certain collar, wherein there is a little blood contained, and they lack eyes and eye-sight, as all sorts of Worms do.

They breed of the slime of the earth, taking their first being from putrefaction, and of the fat moisture of the same earth they are again fed and nourished, and into earth at last are resolved. When there falleth any shower of rain, then this kinde of Worm creepeth suddenly out of the earth, whereupon old *Euclio* in *Plautus* being very careful of his pot of Gold, speaketh aptly to his Drudge *Sirobius* in these words;

*Foras, foras Lumbrice, qui sob terra erepsisti modo,  
Qui modo nunquam compareret, nunc autem cum compares, peris.*

Which may be Englished thus;

*Away, away thou Worm, late from the earth crept out,  
Safe thou wast unseen, but seen, life fails I doubt.*

*In Anularia.*

Here *Euclio* very properly termeth his Bondman *Sirobius*, a Worm because not being espied of his Master before, he suddenly came sneaking out from behinde an Altar where he was hid, much like a Worm, that in moist weather issueth out of the ground. Those little heaps which are cast up and lie shining and wrinkled before the mouth or edges of their holes, I take them to be their pny excrements: for I could never as yet finde other excrementitious substance, droffy matter, or other feculency, but only bare earth in them, whose alimentary juyce and moisture being clean exhaled, they cast out the remainder, as an unprofitable burthen, nothing fit for nourishment. At the entrance of their doors, which yet steadeth them to some commodious use, for stopping and damming up their holes that the rain cannot so easily soke in, they are by these means safely defended from many annoyances and dangers, that otherwise might light upon them.

Their delight is to couple together, especially in a rainy night, cleaving together untill the morning; and in the same they are not folded round about one another like unto Serpents, but are straightly clofed together side-wise, and thus do they remain sticking close the one to the other. They lead forth a certain froathy slime or jelly when that they joyn together. They do ever keep the middle part of their body within the earth, I mean their hinder-parts; yea even in their mutual joyning together, neither are they at any time so fast glewed and clofed, but with the least stirring and motion of the ground that can be imagined, they are straight-ways severed, withdrawing themselves speedily into their lurking holes. In rainy weather they are whiter a great deal than at other times, unless it be when they couple together, for then they appear very red. I my self about the mid of *April*, did once open a thick female Worm, and within the flesh I found a certain receptacle ringed round about, and filling up the whole cavity of the body, having a thin membrane or seat enclosing it, and in this aforesaid hole-houle the earth which she had fed on, and wherewith she was sustained, was held and contained. Her eggs were found to be in a safe place above the receptacle, next to the mouth, there were many of them on a heap together, being all of a whitish colour.

The lesser Earth-worms for perspicuities sake, we with *Georgius Agricola* will name *Ascarides*: and these are often found in great numbers in Dung-hills, Mixens, and under heaps of Rones. Of this sort some are red, (which we Englishmen call Dugs) and these be they that Anglers and Fishers do







Earth-worms do also much good to men, serving them to great use in that they do prognosticate and foretell rainy weather by their sodain breaking or insuing forth of the ground: and if none appear above ground over-night, it is a great sign it will be calm and fair weather the next day. The ancient people of the world have ever observed this as a general rule, that if Worms pierce through the earth violently, and in haile by heaps, as if they had bored it through with some little Auger or Piercer, they took it for an infallible token of Rain shortly after to fall. For the Earth being as it were imbrued, distained, made moist, and moved with an imperceptible motion, partly the South winde, and partly also a vaporous air, it yeeldeth an easie passage for round Worms to winde out of the inward places of the Earth, to give unto them moist food, and to minister store of fat juices, or fatish jelly, wherewith they are altogether delighted.

Some there be found, that will fashion and frame Iron after such a manner, as that they will bring it to the hardness of any steel, after this order following. They take of Earth-worms two parts, of Raddish roots one part, after they are bruised together, the water is put into a Limbeck to be distilled, or else take of the distilled water of Worms *l. iij.* of the juice of Raddish *l. i.* mix them together, for Iron being often quenched in this water, will grow exceeding hard.

Another. Take of Earth-worms *l. ij.* distill them in a Limbeck with an easie and gentle fire, and temper your Iron in this distilled water. Another. Take of Goats blood so much as you please, adding to it a little common salt, then bury them in the earth in a pot well glazed and luted for thirty days together. Then distill after this the same blood in *Balneo*; and to this distilled liquor, add so much of the distilled water of Earth-worms. Another. Take of Earth-worms, of the roots of Apple-trees, of Rapes, of each a like-much, distill them apart by themselves, and in equal proportions of this water to be distilled, and afterwards equally mixed, quench your Iron in it, as is said before. *Antonyus Gallus.*

It shall not be impertinent to our matter we handle, to add a word or two concerning those worms that are found and do breed in the snow, which *Theophrastus* in *Strabo* calleth *Oripa*; but because it may seem very strange and incredible, to think that any worms breed and live only in the Snow, you shall hear what the Ancients have committed to writing, and especially *Strabo* his opinion concerning this point. It is (saith he) received amongst the greater number of men, that in the snow there are certain clots or hard lumps that are very hollow, which waxing hard and thick, do contain the best water as it were in a certain coat; and that in this case or purse there do breed worms. *Theophrastus* calleth them *Oripa*, and *Apolonides*, *Vermes*.

*Aristotle* saith, that living creatures will breed also even in those things that are not subject to putrefaction; as for example, in the fire and snow, which of all things in the world, one would take never to be apt to putrefie, and yet in old Snow Worms will be bred. Old Snow that hath lyeen long, will look somewhat dun, or of a dullish white colour, and therefore the Snow-worms are of the same hiew, and likewise rough and hairy. But those Snow-worms which are found to breed when the air is somewhat warm, are great, and white in colour, and all these Snow-worms will hardly live, or move from place to place. And *Pliny* is of the same judgement, and the Author of that Book which is intituled *De Plantis*, falsely fathered upon *Aristotle*.

Lib 11. c. 35.

Yet some there be that denying all these authorities, and rejecting whatsoever can be objected for confirmation thereof to the contrary, do stoutly maintain by divers reasons, that creatures cannot breed in the Snow: because that in Snow there is no heat, and where no quickning heat is, there can be no production of any living thing. Again, *Aristotle* writeth that nothing will come of Ice, because it is (as he saith) most cold: and hereupon they infer that in all reason, nothing like-wise can take his beginning from Snow; neither is it credible, that husbandmen would so often with for Snow in Winter to destroy and consume Worms, and other little Vermine, that else would prove so hurtful to their corn and other fruits of the earth. And if any Worms be found in the Snow, it followeth not straightways that therein they first receive their beginnings, but rather that they first come out of the earth, and are afterwards seen to be wrapped up, and lie on heaps in the Snow.

But by their leaves these reasons are very weak, and may readily be answered thus; that whereas they maintain that nothing can breed in the Snow, because it is void of any heat at all, herein they build upon a false ground. For if we will adhibit credit to *Averroes*, there is nothing compounded and made of the three Elements, that is absolutely without heat. And *Aristotle* in his first Book *De Generatione Animalium*, telleth us precisely, that there is no moisture without heat. His words are *Ουδεν υγρον ουκ θερμον*. Now Snow is a compact, and fast congealed substance, and somewhat moist, for although it proceedeth by congelation, which is nothing else but a kind of exsiccation, yet notwithstanding, the matter whereof it first cometh is a vapour, whose nature is moist, and with little ado may be turned into water.

I must needs say that congelation is a kind of exsiccation, but yet not simply: for exsiccation is, when as humidity goeth away, it putteth forth any matter, but in Snow there is no humidity that is drawn out, but it is rather wrapped in and inclosed more strongly, and apt were bounded round. Furthermore *Aristotle* in his first Book of his *Meteoris* saith, that Snow is *Nix* congeletas, a clowd congeled or thicked together, and that in Snow there is much heat. And in his first Book *De Generatione Animalium*, he further addeth, that the whiteness of the Snow is caused by the air, that the air is hot and moist, and the Snow is white; whereupon we conclude, that Snow

Snow is not so cold, as some would bear us in-hand. I well hold that nothing will take his Original from Ice: in regard of his excellent coldness, but yet snow is nothing high so cold as that. So then all the hinderance and let, is found to exceed of cold, which is nothing to effectual or forcible as in Ice, and the cold being proved to be far lesser, there can nothing be alleadged to the contrary, but that it may putrefie.

Now in that Snow is such an enemy to Worms, and many other small creatures, as that for the most part it destroyeth them, yet it followeth not, that the reason of *Aristotle* is quite overthrowen: because (as we daily see) that those creatures which live in the air, will for the most part be suffocate and die in the water; and contrariwise, those that live in the water, cannot endure the air. Yet hereupon it followeth not, that if they be choked in the water, that none at all will live in the water; and the same reason is to be alleadged concerning the air. Therefore it is no marvel if those Worms that first breed in the earth, and live in the earth, be killed by the Snow; yet it necessarily followeth not, that no living creature can take his first being either from or in the snow. But if it can, as *Aristotle* witnesseth, it is so far unlikely that the same Snow should be the destroyer of that it first was bred of, as I think rather it cannot live separately, but of necessity in the same Snow; no otherwise then fishes can live without water, from which they first sprung and had their beginning.

And to this opinion leaneeth *Theophrastus*, in his first Book *De Causis Plantarum*, whose words be these, *Απυτα γαρ φησι ται τα ζωα, και τα φυτα και δαμναντα, και γενονα, εν τοις οικησις τοποις*: For all creatures (saith he) whatsoever seem, both plants to remain, and to be generated and bred, in their own due and proper places. And after this he addeth and urgeth a little further, *Απαιρεται εν τοις τοποις*; from his own home and special particular place of abode, nothing can suffer, sustain harm, or be corrupted. And in his first Book *De Caus. Plan.* he setteth it down more perspicuously, how that Worms which are bred in some special trees, being afterward translated and changed to other trees, where they never came before, cannot possibly live. Wherefore it is more consonant to reason, and more agreeable to common sense, to affirm that those Worms which are found folded and rolled up in the Snow, to have been first bred in the same Snow, rather then to have issued out of the earth.

Neither are we to make any question or scruple concerning their food; for there is no doubt, but the mother from whence they proceeded, will provide sufficient nourishment for her own children. For as we said a little before, the Snow is no simple thing, but compacted and concrete together of many, and of this nature ought every aliment to be. *Julius Caesar Scalliger* is of this minde, that Worms are ingendered and brought forth in the very Snow, because there is in it much air and spirit, which afterwards being heated and brought to some warmth together, may cause them to generate; for it is the nature and quality of Snow to make fat the earth, of which fatish moisture or Jelly, there may (heat being joyned) be produced a living creature.

There be some that do constantly hold, that in the midst of certain stones, of which they use to make Lime, there do breed divers creatures, of very different kinds, and sundry proportions and shaps, and likewise Worms, with hairy backs, and many feet, which are wont to do much hurt to Furnaces and Limbeckils where they make Lime. Yet *Cesalpinus* in his first Book *De Metal.* chap. 2. thinketh the contrary, assuring us that in Metal-mines, Quarries of Marble, and other stones, there can never any living body be found. And yet in Rocks of the Sea, within the hollow places and rifts of the stones, they do commonly finde certain small living things called *Dadri*.

I do not doubt, whatsoever he saith to the contrary, but that many creeping, and other living creatures, may be found both in the secret Mines of stone, and sometimes also amongst Metals, although it be seldom seen. And for confirmation hereof, I will alleadge one example happening not many years since in our own Countrey. At *Harlestone* a mile from *Holdenby* in *Northamptonshire*, there was a Quarry of free stone found out, of which they digged for the building of *Sir Christopher Hattons* house, where there was taken up one being a yard and a half square every way at the least, and being cloven asunder, there was found in the very midst of it a great Toad alive, but within a very short space after, coming to the open air, it dyed. This stone amongst others, was taken very deep out of the earth, it was split and cut asunder by one whose name is *Lok*, an old man yet living at this day, it was seen of five hundred persons, Gentlemen and others, of worthy repute and esteeme, the most part of them living at this hour, whose attestation may defend me in this report: and surely if Toads may live in the midst of stones, I can see no reason but that Worms may there be found, but as yet I could never see it.

In the year of Grace 970. at what time *Romualdus* the son of *Sergius* a young Monk, was advanced by the Nobility of *Ravenna* to be their Archbishop, there followed a great death and murder among Earth-worms: after that again ensued scarcity and death of all fruits of the earth, as *Carulus Sigoninus* in his Chronicle of the Kingdom of Italy declareth. *Henry* Emperor of *Rome*, the son of the Emperor *Henry* the third, as *Cranzizius* hath written, when he took his voyage into Italy, being suddenly stayed of his intended course, with an Army sent against him by *Matild*, that he should passe no further then *Lombardy*, yet having taken *Matina*,

there appeared a strange and uncouth sign in the air, for an innumerable company of Worms, smaller and thinner than any Flies, did flie about in the air, being so thick that they might be touched with any small stick or wand, and sometimes with the hand, so that they covered the face of the earth one mile in breadth, and darkned likewise the air two or three miles in length. Some did interpret it as a sign or fore-telling, that some Christian Prince should go into the Holy-land.

In the year of our Lord God one thousand one hundred and four, there were seen divers fiery and flying Worms in the air, in such an infinite multitude, that they darkened the light of the Sun, seeming to deprive mens eye-sight thereof; and shortly after this monstrous and unnatural wonder, there followed other strange and seldom-seen prodigious sights on the earth: and what a boisterous storm of troubles, and raging whirl-winde of War and blood-shed shortly after ensued, the event thereof did plainly manifest.

FINIS.

## A Physical Index, containing plentiful Remedies for all Diseases incident to the Body of Man, drawn from the several Creatures contained in this First Volum.

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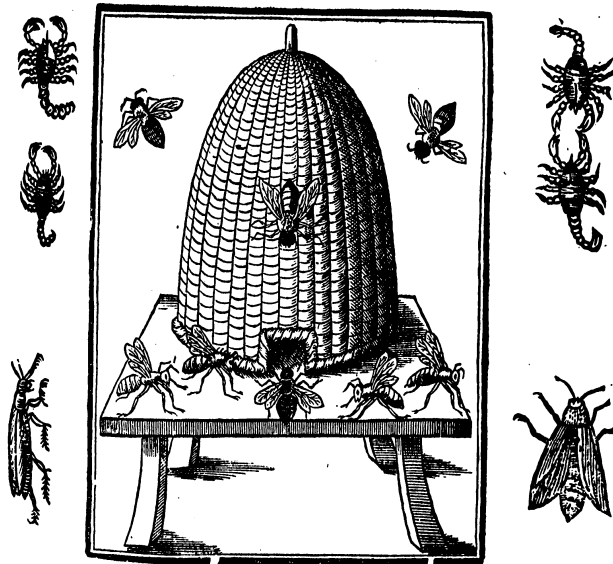
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## FINIS.

THE  
THEATER  
OF  
INSECTS:  
OR,  
Lesser living Creatures.

AS,  
*BEEES, FLIES, CATERPILLARS, SPIDERS,*  
*WORMS, &c.* a most Elaborate Work.

By *THO. MOUFFET*, Doctor in Physick.



LONDON, Printed by E. C. 1658.

To the Noble Knight, and the Kings chief Physician, Dr. WILLIAM PADDY:  
Theodore Mayerne, Knight, Baron of St. Albons, and Companion to the  
chief Physicians in the Court of Britain, wisheth much health.

Our Countryman *Mouffet*, a notable ornament to the company of Physicians, a man of the more polite and solid learning, and well experienced in most Sciences, had formerly entituled this work of Insects to the ever famous *Elizabeth*, (who was wise above her Sex, valiant, born to reign well, and ruled so many years by the Votes of her Subjects, and by her own undertakings and actions, that were so successful that they were envied at) it was begun by others, but augmented by him, polished, and as it now comes forth exactly perfected, and he thought it no indignity to Dedicate to the greatest Princess the miracles of Nature, which are most conspicuous in the smallest things; which testify the infinite power of the supreme Creator of all things, and raise the mindes of Princes who are the children of the most Highest, to the cause of all causes, that they may in all places acknowledge the presence of the Deity, and his bountiful hand in his singular direction in respect of them, and his influence that acts by election, and may adore him with an humble, as with a grateful minde; so weighing by reason the degrees of proportion, that he is most obliged who hath received most. The Author before he could accomplish this purpose, died; he was worthy to have lived longer for the advantage of Art and Learning. Thus the Book was left after his death to his Heir, who had a smaller estate than suited with the name of his Father, or his merit required, and his many watchings and labours sustained for the publick good, in curing of the sick, justly deserved. Fortune is blinde and will hardly favour those that are the best but against her will, as if it were disagreeing and dissonant that there should be any commerce between *Pluto* with *Apollo*, *Minerva* and *Mercury*. *Elizabeth* being departed this life, and *James* then holding the reins of the British Empire piously and justly, and ruling peaceably amongst the storms that at that time shook all *Europe*, having weeded out by his Majestick Scepter, and by the providence of his soul which was prudent even to miracle, all Monsters, which endeavoured to shake the foundations of the Kingdome by Treason, Deceit, Wickedness, Lust, and Wrath. The Orphans of this Orphan left in a very poor condition, were resolved to Dedicate this learned Work to this Noble Heros, who was no less famous for his Learning than for a concurrence of all Virtues that met in him: but great poverty at home, delayed the business, and hindred this windy intention from taking effect, and the off-spring from coming to the light. So the Book lay for a long time in obscurity under the custody of the friends of the Author departed, until such time as it was offered to me by *Darrells*, who was formerly his Apothecary, and a very honest man, who wished well to his Master being dead, and was very desirous of his glory; so it lay for some years in my Study cast aside in the dust among Worms and Moths; truly it was no fault of mine, but of the Printers who were so greedy of Money, that though in many Countreys I invited them by my Letters, and did solicit them to receive the Orphan, yet they refused (as they said) to take upon them an unthankful business; they were not pleased with the benefit of a noble Art, unless it would pay more than the freight. O the times wherein the pains of learned men are valued at the price the work will be sold for, and the money that must be laid out for ink and paper, or by the depraved opinion of the vulgar (who commonly applaud what is worst) and not by the essence of the thing it self, or dignity of the subject, or the solid explanation of the same! Then there was an Epistle prefixed to the beginning which men call Dedicatory, which being it was to carry the name before it of one of the foresaid Princes, the Edition seemed to come forth unseasonably after they were both dead. Perchance some other man would have chosen at this occasion, to have brought it to King *Charles*, the great Son of a great Father,

*The Epistle Dedicatory.*

ther, under whose fortunate reign in his Kingly person, all Kingly virtues run together, in troops, each striving to have the upper hand) and kneeling down before his Majesty, would have offered unto him, in hopes of a reward, another mans Works vail'd with a false cover of commendations, or obscured with the great smoke of courtly eloquence. But I have no such genius, for though I have not lived hitherto unwelcome to Princes, yet I have learned by long practise, that we must use their favour soberly, and never to abuse their ears or eyes, and though you do know esse- trance and fit times to come into their presence, yet importunity is alwaies unseasonable, and especially that which hires mercenary Muses for money to let them forth, which are branded with marks of infamy. Do not think that I detract so much from this Work that I think it not worthy to carry the name of a King in the Frontispice, and might live in publick under the protection of so ambitious an Inscription; but I held it no less than a sacrilege to name the childe in stead of another of my own accord, or to bring a deaf person upon the stage, as to what concerns the exposition of the Argument, and with other birds feathers in the very entrance of the work foolishly and vainly to pride my self: yet that the Book might come forth every way complear, and that the Reader who is a lover of the custome may not desire an Epistle, or complain that there is one wanting, according to my manner (wherewith I honour great men with the honour that belongs unto them, but my friend I respect above all, and that continually) I would prefix to this Natural and Physical History the famous name of some man, who by the common consent of the Learned, is well acquainted with both, and who is joyned unto me by no ordinary alliance, who is dear to all good men, and eminent for his own endowments; which office of Reverence and good will may testify to posterity, in what esteem such men are with me, who are intrinsically furnished with the real rincture of manifold learning, but chiefly with that of the most noble Art of all, which I practise: so I have made choice of thee alone amongst many, that thou mayst be to me in stead of them all, Noble Man, my dearest friend *Paddy*, who art Knighted by the wisest Monarch *James*, who never did any thing vainly, who adornest thy Virtues by thy Titles, and thy Titles by thy Virtues, as our *Thorow* hath written of thee. Thou art he who after the wicked Parricide of Great *Henry*, formerly my most milde Master (which shall for ever convey the said memory of his age to posterity) when I was called by the most Serene *James* from the French Court by his own Letters, and by a guide appointed to conduct me into *Britain*, and was immediately honoured with the title of Companion of the chief Physicians, didst not look upon me with bleer and swollen eyes, with the viperous venome of envy; but thou didst entertain me, being a stranger, candidly, and with a cheerful countenance, (as it becomes one of noble Birth) contrary to that of *Horace*, who acculeth the *Britains* divided almost from all the world, of fierceness toward strangers. After that, in the many meetings we had amongst sick people, and in my practise in Physick, when I piously hearkned to the opinions of those that consulted, weighed them, and as it belonged to my place, concluded what was to be done, thou didst hear me without bawling or contradiction, which is the imbred evil custome of some unworthy Physicians; and thou didst very often approve of my opinion, as consonant to reason. In the famous Colledge of *London*, (where as thou wert alwaies most worthy, so thou wert often President) when I was by the votes of the chiefeest, and first of all by thy suffrage made a Colleague, according to the Kings Character for my place at Court, thou didst willingly suffer me to have the next place to our President: I farther add, that thou didst never oppose thy self to the many petitions or commendations that were offered by me to our most excellent Colleagues; but thou didst alwaies afford me thy ear to hear me, and thy hands to help me. Lastly thou didst alwaies praise me being absent, and as far as it was in thy power, of thy own accord, from the imbred motion of thy noble minde, thou didst defend my good name privately wounded by the calumnies of envious men, and torn by malice, (which is the condition of good, and of the greatest Princes) by that authority which thou hast amongst thy own Countreymen of what condition soever, and thou wouldst not suffer this scab of backbiting to proceed any farther. O most excellent Man! what shall I repay unto thee, who as a true Philosopher, hast no desire of vain glory, and such things as make a great shew and are vulgarly praised, sought for, and desired by other men, are now esteemed base with thee? My grateful minde, and most full of love towards thee, commands me to offer this small token to thee in testi-

*The Epistle Dedicatory.*

mony thereof, which I accept freely and willingly, and suffer that by this sincere gift, that wicked laying may be disannulled, that men of one profession cannot endure one the other. God the best and the greatest hath granted unto thee long life, by a prosperous aspect of the Stars, for the good of thy Citizens, whose health thou hast preserved and reitored by thy care for very many years effectually hitherto, that posterity must justly acknowledge that thou hast lived long, worthy not only of a Garland of oak, but a Statue of gold also, (if our times would afford such honour) . . . Now thou well deserving Caprain, discharged, by age, thou Champion freed by reason of years with a token of honour, thou conqueror of monsters, that daily spring up with too fruitful an increase for the destruction of mankind, dwellest with thy self, thy soul yet sustaining thy dry body yeelding to wasting time, by degrees very easily, which being defiled with no conditions of thy prison, sees the Hæc, and is almost come into it; thy minde being abstracted from the sad vexations of humane life: and what time thou hast to spare from divine Meditations, penetrating into all Nature, and the secrets of things, thou dost expatiate into the pleasant green Gardens of various natural Philosophy. Behold here is a most exquisite Garland for thee gathered out of the most secret Orchard of our great Parent, which will not only feed the eyes, but will lead the singular acuteness of thy wit, which thou aboundest with into her most hidden places. Thou being an excellent Anatomist, I beseech thee try if thou canst dissect Insects; the great *Staggyrite* being thy guide, who did not disdain to search into the parts of Animals. Thou shalt finde in the little body of Bees a bottle which is the receptacle of Honey sucked from flowers, and their legs loaded with Bitumen which sticks fast to make wax. Also in the tail there is a horny sting full of revenging poyson, that is ready to draw forth as soon as the Bee please; but the King of the swarm is said to want one, for there naturally belongs to the Supreme power, who can overthrow all when he will at his pleasure, and there ought to be an imberbed gentleness, whence it is that Kings by their proper attribute are called Fathers and Pastors of the people. In Gnats you shall observe their sounding trumpet that will suck blood out of Animals, and will draw out moisture through the joynts of the most solid wood, and wine-vessels. How wilt thou be pleased to see the small proboscis of Butterflies wreathed alwaies into a spiral line, after they have drawn forth nutriment from flowers, their extended large wings painted by naures artificial pencil, with paints cannot beimitated; to which the very Rain-bow is scarce comparable;

*Which right against the Sun a thousand colours shewes.*

What a pleasant spectacle will this be when the artificial hands carefully and curiously guide the most sharp pen-knife, and very fine instrument by direction of the sight! To behold the pipe of the Grashoppers that live upon a dew, and the organs of the shrill found they make, that in the heat of the Dog-days unfortunately beats upon the ears of travellers, which are so framed, that their concave belly is made vaulted under the Diaphragm, over which is extended a cover of a thin and dry membrane, like to a Drum, which lets in the air by an oblique turning, which being beaten by the regular and successive motion of their wings, and stomach, coming in at a strat passage, and presently dilated, beating against the rough-cast wals of the hollow place, and refracted, makes a found. To see the horns of the great Beetles, that are like to Stags horns, and with sharpest points are able to make wounds, and the muscles that move them, and tye them on exceeding fast. The Rhinoceros is of the kinde of great Beetles. The swelling purple which is the matter of the silk, and is wound back again into many turnings, by Silk-worms which are chief of all Caterpillars, of divers forms and colours; in which after the time delineated for the concoction of their food, which is gathered chiefly from Mulberry-leaves, a tenacious glew or jelly is reserved, untill such time as their ventricles swelling, and nature affording to attain her end, the Worm by degrees belcheth forth her spittle, the thred whereof growing firm by the air (which is provided to make garments for great men) this little creature dispenseth through her very narrow elaws, and spinning with the motion of her head and of half her body, with the kembering of it by the help of her forefeet; she first disposeth it for the strengthening of her clew of yarn, and after that upon her own sepulchre where she must receive her transmutation. How the Spider thrusts out her excrements by her lower parts of her body, which is drawn

forth into a web, of which the poor creature frames nets with great labour, which are necessary to sustain her life; and with her long legs that end in sharp claws, she knits them into knots, being continually obnoxious to repair her work. In the uppermost cases of the green Locusts which feed upon hedges, there are two scales that are hard as horn, the mutual rubbing together whereof by the ministration of the air beaten with their softer wings, make a very sharp sound. The head of all of this kinde is armed, their hinder legs are hard, dry, long, by the vehement thrusting whereof against some firm object, with the help of their most strong tendons, they will cast their body a great way, being equally ballanced, and is heavy enough for the proportion of it, like an arrow coming forth of a bow; as it happens to Fleas that leap with a huge force. But which is yet more, besides their pincers which are as sharp as keen razors, where is a direct passage from their mouth to their tail; the pylorus is compassed about with toothed bars, sage from their mouth to their tail; the pylorus is compassed about with toothed bars, that answer one the other with a thorny gomphosis, wherewith they destroy whole fields with devouring fore-teeth, like chisels, and grind them as it were in a mill, and very suddenly they void it forth again; their hunger never ceases until the vile creatures have consumed whole Countreys which God is angry with, divine revenge commanding them; and brings to nought that people, who ridiculously threaten heaven with destruction. You shall see the sharp spears that arm the mouth of the Spiders Phalangia, and by the small wounds they make, a strange venom enters, and penetrates into the center of the body, and sticks fast to the deepest marrow, lasting so long in the subject that receives it as the cruel beast lives; and is exasperated periodically at certain hours, troubling the phantasie of the persons wounded, which is abated with colours objected like to this Spider; yet it ceaseth not to rage, until musick causeth them to dance, and provokes them to sweat abundantly, whereby the paroxysm is dissolved, which the day following returns at the same hour. You shall behold the internal fire of Glow-worms fastned to their tails, and the torches of the Indian Cocua that shines in the night, and overcomes Cimmerian darkness. And moreover, if you take lenticular optick Glasses of crystal, (for though you have Lynx his eyes, these are necessary in searching after Atoms) you will admire to see the dark red colour of the Fleas that are curasheers, and their back stiff with bristles, their legs rough with hair, and between two foreyards there stands a hollow trunk to torture men, which is a bitter plague to maids, and is the greatest enemy to humane rest, especially when that men would sleep. You shall see the eyes of the Lice sticking forth, and their horns, their body crannied all over, their whole substance diaphanous, and through that, the motion of their heart and blood, as if floted in *Entipus*. There will appear to thee the flat bodies of the petulant Crab-lies, with their grapples, wherewith they perpetually lance mans skin between the hair with their mouth, and stick on faster than Cockles do to the rocks. Also little Hand-worms which are indivisible they are so small, being with a needle pickt forth of their trenches neer the pools of water which they have made in the skin, and being laid upon ones nail, will discover by the Sun-light their red heads, and feet they creep withall. And if from the inspection of parts you will recal your minde to consider the generation and beginning of Insects, and will weigh the various transmutations which they undergoe, as of Worms into Flies, of Caterpillars (the several species whereof have their original from the corruption of several vegetables) into Chrysalides, (that shine as if leaves of gold were laid upon them) and Butterflies, whose egges again produce an off-spring like Worms, Nature acting successively in a circle, and constantly by a perpetual motion running back into her self: you will doubtless enter upon a large field of Philosophy concerning three Kingdoms of the universal spirit, (the Vegetable, Animal, and Mineral) equally penetrating, replenishing, and governing, and upon the power and activity of it, introducing divers forms into beings that pertain to each of them, according to the disposition of the matter: also the commerce of all sublimary bodies amongst themselves will exercise your contemplation, which though oft times they seem to fight one against the other face to face; yet they agree in one, and from one the other, all and each of them borrow something. And if Animals and Plants be transmuted, why should that be denied to Metals? which thing, many genuine Miners and legitimate helpers of Nature boast, and not without reason, that they can do it by Art: and that only by removing of impediments, and by a convenient application together of actives and passives; which being done, the Philosopher leaves the whole

work to Nature only, which by a gentle outward heat, being helped without too much haste, doth raise up an internal fire; which is the Workmaster of the Elixir that must procure health and riches: that I may hiss out Ases, who triumphing in the Lions skin, erect a tumultuous and confused furniture in their Laboratories, and dig forth all things under ground from the very bottoms of Mines, and melt them in the fire, being desirous to make trial of their own dreams.

*Their Patrimomes they together pack,  
Plying their hidden work with Coles full black;  
When they have spent, and Labour'd all in vain,  
Nothing they finde, nothing they seek again.*

But passing over these blowers of the Ashes, if you be pleased to reason deeper concerning Insects; you shall finde what will exercise you in the Monarchical government of Bees, the Democratical of Ants, and the oeconomical providence of them both: of that in gathering and laying up Wax and Honey: of this in replenishing her granaries, and biting asunder the grains of corn: at that end where they spring forth, lest the provision which is gathered with hard labour, and laid up for winter, by the force of an imbred heat in their work-house under ground (which is hot whilst the Winter lasts) should corrupt, being spoiled by a sudden production, and a plague arising, together with a famine overspreading, should destroy the whole nest. Nor can you lightly pass over the Architecture in framing the cells in the combs of wax, mathematically to an exact Hexagon; in the hollow places of a Wasps nest; in the various chambers of the Ant-hill, and winding Meanders in the joyning together whereof he saw granaries, chambers, hospitals, places of burial, besides the innumerable endowments of these indefatigable creatures, their functions and labours, and he could not admire or praise them sufficiently, who had spent a long time in the contemplation of them, thinking it a work worth his pains, his whole life past being employed in this negligent and very idle business. Silk-worms, all Caterpillars, and Spiders, hew their art in spinning, making snares for Flies, and pitching their nets to provide themselves victuals. The Wood-worms practise graving, with the rasp of their mouths piercing into the timber: Ants and Bees, amongst other Insects, will teach men piety toward old men, tired, sick men, and their own children: Oyl Beetles sacred to *Apollo*, will teach them to love their off-spring, who never cease for 28 daies to rowl up and down a dung-pil, (which is the receptacle of their seed) from East to West, following the Suns motion, until it be fit to hide in the ground for the production of their young, after the space of a Lunar moneth, which nature hath assented for the forming, and excluding of this Worm, which shall at length become a Fly. Here take notice that the male hath a prolifick seed without help of the female, and can generate by it self putrefaction of fit matter interceding in a convenient matrix, though it be not animal. But (that which crowns all the meditations of a Christian man, and carrieth him aloft) consider how the Silk-worm makes her self a tombe, that is impossible, by reason of her woven work that is most compacted within, in which the Worm contracted into it self seems to die, and by a prodigious metamorphosis is born anew a Butterfly, a more noble creature, which by the weaving of its wings flies up into the air toward heaven, whereas before its burial it lived a base creeping creature fastned to the earth, and glued to the food of the ground. See whether a little beast that is obscure, of the kinde of Locusts, living amongst the stubble of the fields, when she is consumed with extreme leanness (which from the posture of one that is praying, the French men of *Narbon* call *Pregadion*) do not teach men to hold up their hands in prayer unto heaven, and admonish them to observe a convenient gesture in offering up their supplications unto God. What think you of the greater Beetle, the Indian Rhinoceros, which being bred without a female (as the rest of the like kindes are) dies, and riseth again out of her own corruption, like a Phoenix, after her change, when she was supposed to be wtolly dead. Lastly, what think you of Flies, which when they are drown'd many hours in water, if you bury them in hot embers, you shall revive them again. Truly I doubt not but that amongst those serious cogitations, (the object whereof will seem not so serious in respect of other false appearances of men, that are illiterate and unreasonable) thy minde may rise to its original, and fastning thy eyes on heaven inspired by



God, wilt cry out, O the depth! and with the divine Psalmist wilt return a Psalm of thanks to the Maker of Nature: *How wonderful are thy works O Lord! In wisdom hast thou made them all, the earth is full with thy possession.* So shalt I have: whyleby: I may rejoyce, that however the whole course of thy age hitherto hath been but one continual act of Philosophy, yet that by the rare advantage of this Present which is curious with variety, I have given thee a new occasion of no less solid and profitable, than of pleasant and ingenious meditation. Suffer therefore that a friendly hand may convey into your Library the Off spring of the most learned *Mouffet*, which is now at last published and brought to light, and amongst so many volumes wherewith thy Study itself are almost excellently furnished, assign a place for it, worthy of the Father and the Son. Besides the good things mentioned that shall from thence accrew unto thee, and the very great increase thou shalt reap from the hours thou shalt spend in reading the Book, (if I may jest with thee) thy own profit shall not want its advantage, lest thy proper benefit should here seem to be neglected. In these leaves thou shalt finde what will drive away the plague of thy delights, those beasts that are the greatest enemies to the Muses & their darlings, I mean the Moths that devour Books, which with a greedy belly and iron teeth (though their bodies be very smal) prodigally waste and rend the lucubrations of whole ages. Let those evil beasts that are the most deadly mischiefs of angry nature be destroyed after an ill manner: to prevent the propagation whereof, and to kill their infamous progeny (whilest in the mean time learned writers of Books endeavour to abolish their kinde utterly, or their sedulous Collectors do what they can) this Book (which I send to thee as a remembrance of my love, will teach thee in the Chapter that treats of it. But let it suffice, I began with a small pitcher, why should the wheel run till it fill an Amphora? The heat of good will and fruitfulness of the subject carry me away; I must now take off my hand, lest my Epistle should proceed absurdly beyond the bounds, which already unawares hath increased into a volume. Believe that I am affectionated to thee, and how well I wish and desire to thee, these lines I have written may speak. What remains of thy daies which God hath appointed thee to run the race of thy life, before thou receive thy heavenly reward, I wish thou maist finish without any pain of minde or body; and that I may speak with *Aristotle* writing his last Testament, I pray from my heart, that thou maist live longer here, for it is well, but if any thing happen, that thou maist safely arrive and enter gloriously into the harbour of the blessed at the moment decreed. Farewel.

From my Study in the Isles of May, and the year  
of Mans Redemption, 1634.

A Preface upon the undertaking of this Argument;  
and of the worth and use of it.

**T**HAT the History of Insects is worthy of the chiefest Philosophers, the pains of great Aristotle, and Pliny, and of our Wotton in describing them doth sufficiently demonstrate. After their time Conradus Gesner laboured not unfruitfully, to perfect that work which they began; but by reason of his short life, he fainted in the beginning of the race, nor was he able to put an end to it. But when Pennius of blessed memory met with these papers by a better fate, for fifteen years together by infinite reading of all Authors, he enriched the History by the exceeding great help of Quicquellbergius, Clusius, Camerarius, Sir Thomas Knivet, and of his most learned brother Edmund, Jo. Jacob, Roger Broun, Brito, but chiefly of our Bruer; and some courtesy of Peter Turner. That is to be lamented, that he also was taken away by untimely death, before he had disposed of the matter and framed it to the dignity of this work, which he had heaped up together on all sides; Hence it was that his Letters were full of blots, and confused with doubtful Characters: and they had perished, had not I laid them apart, when they were ready to be cast out of doors; and with a great sum of money had redeemed all the torn pieces of it. For I had rather something should be taken off from my own estate, than from his glory, who had spent so much pains in the description of Insects, and so much money for the Plates engraving; wherefore this *Mans* and *Gesners* and *Wottons* fragments being disposed in order, adding to them the light of oratory which Pennius wanted, I forged the History, and according to my abilities, (which I know how small they are) I at last brought it to a period. At first I was deterred from it by the difficulty of the work, because I saw that Insects are hard to be explained, but in respect of the unfitness of the subject, and also of the sublime or rather supine negligence of our Ancestors in this point: for they stood still in the very entrance, and they saluted them only by the way, or as the proverb is, as the threshold of the door. I also feared that (which fell out it may be) lest there should want dignity of oratory, for so exquisite a Narration, chiefly when as I oft observed Pennius to be gravelled here, and I seldom went to those that were Artists of words. Also for a time I was detained by examining the causes of Insects, which being unknown, the History can neither be well pen'd, nor rightly conceived. Moreover friends checked me (and that sharply) that I did but rough-cast another mans building; as though I were one who sought for the Garland in every business, and thirsted after glory more than it was fit for me. They said moreover, that since some worthy honest and profitable end must be propounded to every business that is rightly undertaken, yet none of these was to be found in these imperfect creatures, but I should lose my time, charge and labour exceedingly. By these hinderances I was as it were made fast to an anchor, and left off for a short time to sail any farther: and sometimes taking up my pen, sometimes casting it away again, I was in divers mindes, until that certain reasons allayed these floatings of my thoughts, and did again kindle, as it were, a desire in me to hoise up sail again. I opposed against the difficulty of the work, the desire of attempting things that were very difficult, remembering that for nine years Troy seemed to be impregnable, but was taken in the tenth year it was beleaguered. As for the dignity of the style, I was persuaded that men of sound judgement would not consider how neatly, but how well I discovered the nature of Insects; for however some mens vain wits, desire much affected eloquence, yet those that esteem of things soberly, altogether reject it. I put off the ignorance of the causes, with the answer of Theophrastus, who though he sunk under his too earnest enquiring after them in plants, yet he did not conceal so profitable a History. Is shall suffice us to have measured the causes by humane capacity and mete-yard; for as it is the part

of an ambitious man to promise a certain knowledge of them which is only in God, so to have no knowledge of them at all, is the part of a beast. The example of Galen, took away from me the fourth scruple I had, who though he added to Hippocrates but a few things, except the grace of Oratory, and did only open that way of Physick which he had set down, yet is he so placed in the second rank amongst Physicians, that many think him worthy to have the first. Which thing I have not only done in this book, (I am willing to speak the truth concerning my own work) but I have inserted in this History, and above a hundred and fifty pictures, which Gesner and Pennius knew not, I have mended the method and language, and I have put out, above a thousand tautologies, trivial matters, and things unseasonably spoken: for I have had regard to the squemish stomachs of men of this nauseating age, that not only loathe Coleworts twice fed, but even Amrosia twice set upon the table. Notwithstanding how small soever this my pains may appear, (for it cannot be thought no pains) he that shall make trial in something of this nature, he will rightly perceive my labour, and will of his own accord take heed how he go to repair old and decayed houses, with new matter; it had been better to have written a new History than to have mended this which was so rattered and confused. As for vain glory, I desire it may be as far from me, as I with the lights of this History may be near to you. I confess that not to love honour is contrary to mine, and all humane nature, yet so that I hold boasting to be amongst the greatest vices, and I equally reject foolish ostentation in small matters. Socrates, Plato, Hippocrates, have taught us better, who in their times both writ many things, and were exceeding far from the ambition of glory. I know not whether they are to be numbered amongst men most desirous of honour, who publishing nothing of their own, make unlearned men to conceive of them, that they abound with hidden learning, as if they were like bottles for sooth, that were so full, that they drop overflowingly slowly or not at all. I shall add this concerning the dignity of this History of Insects, (lest we should think God made them in vain, or we describe them) that in the universal world there is nothing more divine than these, except Man. For however in them they are most abject and sordid, yet if we look more nicely into them, they will appear far nobler than they promise in the bare outside. It oft times comes into my mind (saith Galliardus) to think of our Italians, who commonly admire vehemently things noble for magnitude, or new and unusual, but things obvious in all places, and that are very small they despise, yet if they look exactly to the matter, it will be easie to shew, that the divine force and power shew themselves more effectually in mean things, and they are far more miraculous, than those things the world with open mouth respects so much and admires. If any man bring from far the wonderful Bistour, Elephant, Crocodile, there is no men but runs quickly to see that, because it is a new thing and unusual, and when they have leave to see them as much as they will, they only wonder at their greatness, colour, and such things as fall under the apprehension of their senses. But no man regards Hand-worms, Worms in Wine, Earwigs, Fleas, because they are obvious to all men, and very small, as if they were but the posities of lascivious and drunken Nature, and that she had been sober only in making those huge and terrible beasts. Nor is this vice peculiar to the Italians only, but it is common to the English and to all mankind, who that they may see those large beasts that carry towers, the African Lion, the huge Whale, the Rhinoceros, the Bear and Bull, take sometimes a long journey to London, and pay money for their places on the scaffold, to behold them brought upon the stage: yet where is Nature more to be seen than in the smallest matters, where she is entirely all for in great bodies the workmanship is easie, the matter being ductile, but in these that are so small and despicable, and almost nothing, what care? how great is the effort of it? how unspeakable is the perfection? as Pliny saith. Do you require Prudence? regard the Ant. Do you desire Justice? regard the Bee. Do you commend Temperance? take advice of them both. Do you praise valour? see the whole generation of Grasshoppers. Also look upon the Gnat (a little Insect not worth speaking of) that with her slender hollow nose will penetrate so far into the thick skin of the Lion, that thou canst hardly or not at all thrust a sword or javelin in so far. A man hath need of steel to burst into oaks, which the Wood-worm eats hollow with her teeth: as the sound can tell thee, and as if she had Polycletus his graving instrument, she carves out cedar. But if I will relate the skill of some of them in building, fighting, playing, working, perhaps I might be thought over-curious in these small things, (of which the Law takes no notice) and

more diligent in greater matters. Now I come to their use, and that manifold, and in respect unto God, to Nature, or to man, very great. For if the Gentiles according to what saying of the Apostle Paul, Know God by the creatures: truly they may know, if they will watch-tower behold his Omnipotence, might, Providence. For some of them are so small, that like those lines Callitricies drawn, they cannot be seen but with great skill, and when the Sun shines very bright: as I remember I once saw a Fly far smaller than a Worm in wine. Would you have a Musician? hearken to the Grasshopper, which is always filled with singing, and lives without meat, and by her most pleasant melody challenges the Nightingale. Would you hear a Trumpeter? build your ear to the Bee-hive, hear the humming noise: hearken a little to the Gnat, in whose small beak the greatest workman hath formed that horrid and glancing sound of the Trumpet. Do you desire a Composer? yet when the Egyptian Magicians deceived Pharaoh by producing the greater creatures, in the forming of this so contemptible a creature, they yielded the garland to Moses: wherefore Galen (17. de usu partium) breaks forth rightly into these words, As if he had explained the wonderful generation of hairs, and the use of them: saith he, If there be so divine virtue in parts that are so sordid and nothing considerable, how great may we suppose the excellency of the same is which rules in the heart and brain? Truly if man that is addicted to no sect, would freely enter into the consideration of things, considering the fabrick of any even the smallest creature, and that in every part though never so base, so great virtue resides, he shall easily understand the excellency of the mind which is in man, and from the principles in physick shall ascend to Divinity, which is far better and more excellent than all Physick. I suppose that no nation nor society of men amongst whom there is any Religion of the gods, have any thing comparable to the Eleusinian or Samothracian Ceremonies; yet these do set forth but obscurely the mind of all things which they profess, which is plain enough in the fabrick of all living creatures. For you must not think that in Man only the Art of the great Artificer is so great, as I have explained before, but what creature deeper you would dissect, you shall find the like art and wisdom to appear in it. And such creatures as you cannot possibly dissect, will make you to admire the more, the smaller they are. For if a certain Carver lately obtained exceeding great commendations, and that deservedly, because on a very small Ring he so curiously engraved Phœbus riding in his chariot with four horses, that you might see their snout, bits, teeth, to feet, and all their parts exactly framed: truly since all that workmanship had nothing in it more excellent than the leg of a Flea, it is evident that God that made the Flea, hath more Art and Excellency in him, than not only made it, but that he did it without any labour, and when he hath made it, doth continually feed and nourish it. Wherefore let us leave off to admire any longer the vast and huge Calosse, and with the chief Master of true wisdom, let us descend from the Cedar to the shrub, that is, from the most highest trees to the most contemptible weeds, or rather the most abject of all vegetables. And if he thought that the history of the meanest plant was not unworthy of a King to contemplate and write of, how much more excellent are Animals than Plants, so much more doth this work deserve the patronage of a King, and philosophical contemplation than that doth. When Heracles had invited some of his friends to his poor Cottage, they stood only before the door, being afraid to come in because the place was so narrow, or the room so foul: to whom he spake thus: I pray come in, here are Gods also: thereby implying that the greatest God was in the smallest matters, and that there was a spirit in all things, though never so despicable. And truly, if the fabrick of Insects were worthy of so great and divine Artificer, how can the contemplation of them be unworthy of the understandings of poor contemptible men? Amongst the souldiers of Paletina, God raised great Goliath, a Giant amongst men, yet would he have him overthrown by the sling of one poor shepherd. Amongst the Spanish Pilots, how many tall Mariners there were: yet they all submitted to one small Drake, and Neptune himself in a manner yielded up his Mace to him. The Oak is great, and grows very large, but God dejects it by the slender Ivy that clings about it, that it might not grow proud of its force and might. Farewell then all those that so much esteem of creatures that are very large, I acknowledge God appears in their magnitude, yet I see more of God in the History of lesser Creatures. For here is more of prudence, sagacity, art, ingenuity, and of certain evident divine being. Wouldst thou praise Nature, Gods ordinary hand? from whence

whence wouldst thou take thy beginning better than from Insects? for where hath he planned so many senses in a Gnat? where (saith Pliny) hath he set the eyes? where the smelling? with most curiosity hath he fastened the wings? with what great art hath he extended the small legs? and disposed the hungry hollow belly; and hath made it thistle after men's blood? and as the small beak is hath cannot be seen, he hath so made it done by a reciprocal art, that it should be sharp pointed to enter, and hollow to draw it forth. I let pass that admirable variety, comeliness, and fecundity that is in Insects, which commend the riches of quickning Nature in greater multitudes, and set forth unto us the great plenty of it, which cannot be exhausted. If you consider men, as they cure almost all the diseases of men's bodies, (as I shall declare more at large in their History) so they furnish their minds with variety of examples of virtues, whereby they may instruct their souls, and teach them, that otherwise would be very wicked. Wherefore Solomon the principal Master of true wisdom amongst men, sends sluggards to the Ants hill, and summons people to the bands of Locusts, and incites mortal men to the contemplation of the Spiders in their houses, that from the School of Insects we may learn virtue, and may lift up our eyes unto the power of God, which are too much turned away from him. Go it, saith Tertullian, O man thou reliest upon thy own strength, and distrustest God, yet consider that there is so great strength in the smallest creature he hath made, that thou canst not endure it, nor ever be able to do as much. Imitate if thou canst the Spider's wisdom, and endure the sting of the Spider Phalangium, avoid the nastiness of Lice, take a Gnat out of thy throat, keep when Fleas or Wiglice bite fiercely, keep thy roots safe from Caterpillars, drive away Weevils, Trees-worms, Vine-worms, and Timber-worms: wherefore as God shows his power more in this more notable Artifice of Insects, so his great mercy is more apparent, because there is hardly any disease of the minds or body, but a remedy may be fetched from this store-house to cure them with. If men should deny that they contribute very much to feed, and fat, and cure many other creatures, Birds and Fishes would plead for them, and the brute beasts that feed on grass would speak in their behalf: wherefore though with many every thing that is new, or hard to obtain, is most valued, and this is accused by the perverseness of wicked men, and ignorance of unlearned men, it be a work of curiosity, ostentation, and of no profit,

Yet see its shape of things that are so small,  
Nature, and Fate, and great original.

Wherefore I exhort those chief men, which I named at the beginning, who have deserved excellent well in the History of Insects, by communicating both the things themselves and their pictures, that with that humanity they have been assisting to me, and to Penius his heirs, they would continually proceed in the same for the augmenting of this work: so shall they be truly accounted, as they are, Physicians sons, and shall most amply fulfill the glory of God and Nature. To which if I may appear to have had as much regard as I have had to the certain profit of men by this work, I shall not regard the envy of any man; for I never studied to please all men, and yet I always endeavored to offer unto the Creator of all things, some part of thankfulness.

# THE THEATER OF INSECTS: OR, Of lesser living Creatures.

## CHAP. I.

### Of the Names, Description, and Differences of Bees.

IF all Insects, Bees are the principal and are chiefly to be admired, being the only creature of that kind, framed for the nourishment of Man; but the rest are procured either to be useful in physick, or for delight of the eyes, the pleasure of the ears, or the compleating and ornament of the body; the Bee doth exceed them all in every one of these.

They are called by the

Hebrewes, *Deborah*.  
Arabians, *albara Nahalea Zabar*.  
Illyrians, *Wozela*.  
Italians, *ape, api, una fischia, molcastella, ape a scoppa, pecchi*.  
Spaniards, *Abeja*.  
French, *monches a miel*.  
Germans, *ein ymme bynte*.  
English, *Bee, beer, beem*.  
Flandrians, *Bie*.  
Polonians, *Pczota*.  
Irish, *Camlii*.

The Name

The Grecians give divers names to Bees, according to the diversity of Nations, Countreys, and places; for divers nations do attribute divers names to them. But the most common and vulgar name is *abeja*, (but *Hesiod* calls the Bee *melis*), because they are busied in their work, *melis* is *melis* or because of their sweetness, or rather *melis* is *melis* in regard of their honey, in making of which the Bee is a cunning artificer. For they are *abeja*, from *abeja*, because there is no insect more studious, more industrious, and laborious. *Hesiod* calls them *megilla* as also *abeja*, *Gesner* had rather read *melis* for *melis*, for it is also called *abeja*. But *Strabo*, *Aristotle*, and others, do rather make it a Homer or a Wasp. Although *Gaza's* interpretation, and the Poets do call it *Apis* Bee. *Stephanus* calleth them *melis*, whence *melis*, that is, I do hive Bees. *Hesychius* calleth one kind of Bee *abeja*, and others call it *melis* from its framing. They are called also from their destroying of flowers *abeja*, that is, destroy-flowers; or *abeja*, that is, yellow, from their natural soyl and seed *abeja*; and in regard they have blunter stings than Wasps, *abeja*, and from the sound and buzzing noise of their wings *abeja*, *abeja*, than Wasps, *abeja*, and from the sound and buzzing noise of their wings *abeja*, *abeja*, though some in *Isocrates* do interpret the name by *Gnat*, when he writeth that some have writ in the praise of *abeja*. But *Bombus* is properly the noise Bees make: *abeja*, among so many significations, saith *Hesychius*, *abeja* *abeja* *abeja*, a kind of stinging Bee; *Isidorus* calleth him the King or Emperor of the Honey-tenets. In respect of his common inheritance, he

is called *diether*, an airy inhabitant; in respect of its country *diether*, as it were the Trojan woodpecker. The Bees receive also divers appellations and names from their offices and employments, as some are called *diether*, from their command; some *diether*, from their sweet singing; some from their work, *diether*, and some are called *diether*, or *Potter*, in regard of fashioning of their combs, or their employing of their waxen cells, where the Bees do secure themselves from the injury of the wind and rain. The Latines call these Insects by one name, *Ape*, or Bees. *Varro* calleth them sometimes Birds, but improperly, for they are flying creatures but not Birds. Some think they are called Bees, because their swarms do cleave together by the feet, like a bunch of grapes. And beside the most conceive that name of *Ape* is compounded of *a*, a privative particle, and *per*, a foot, as if they were produced without feet, as *Virgil* saith, *Trunca pedum primo*, that is, lame, or deprived of feet. *Servius* is of the same opinion. And truly the new fresh brood (which the Grecians call *gala*) do want feet, but in the time appointed by nature, out of the cruddy and waxy comb the Bees do creep forth. But in regard it keepeth not this analo-  
*gical* of the name of *Biper*, *edit*, *Tripes*, *edit*, *compes*, *edit*, the name is more simple, from whence comes the Diminutive *Apis*, or a little Bee.

*Ape* or Bees  
whence is cal-  
led.

The Defini-  
tion of the Bee.

The Bee is an Insect living creature, four-winged, bloudlesse, skilful only in his artificial making of honey. For he that writ *the Garden of Health*, seemed to doze much by confidently affirming that Bees were four-footed beasts, for Nature only bestowed on them four feet that they might go upright, and not more, lest it might hinder their flying. But omitting this fault, Author, let us more amply describe this most profitable and wise Insect.

The Descrip-  
tion of the  
Bee.

Their eyes are homely and made inwardly, and so is their tongue, neither do they want tongue, and teeth; they have four wings, which are dry (as those of all other Insects) shining, and suited or joyned to their shoulders, the last whereof are the least, that they might not hinder their flying; two claws are it were growing forth of the ends of their little feet, between which in stormy weather they carry a stone to poise and ballance their light bodies, lest the impetuous violence of the wind should drive them from their houses; and therefore we need not give credit to *Lucian*, that they ought to be called *Zoa aëria*, footlesse creatures. They do not breathe (by *Pliny*'s favour) but pant, and are refreshed by transpiration. Their stomach is framed of the most thin membrane, wherein they not only conserve and keep their collected honey, but concoct, and purifie it; which is the reason that Bees honey may be kept longer than any Manna or aerial body, or rather is altogether incorruptible, as we will see hereafter.

*Aristotle* 9. *Hist.* cap. 10. saith that there are nine kindes of Bees, six whereof are sociable, and do live together, as Bees, the Kings of Bees, Drones, Wasps, Hornets, Moths. Also three solitary and inociable, the greater Siren, the lesser Siren, and the Bumble-Bee; of which *King Simius Albertus* does reckon up nine, but gives them such harsh and barbarous names, that it seems he rather faigned them, than knew them. *Lib. 8. tract. 4. cap. 2.*

But Bees do differ, and are distinguished in regard of their matter, form, wit, disposition, and office, and these are all their genuine, and natural differences, which I have collected out of infinite Authors. Concerning their matter (if we may credit the curious searchers into the works of nature) some of them are called *diether*, or the Lions brood; others *diether*, the Bulls brood; and some *diether*, or the Oxen brood; and some *diether*, or the Calves brood. But the best and noblest bees are generated and bred out of the Lion, and the Kings and Princes of them do derive their pedigree and descent from the brain of the Lion, being the most excellent part of his body: it is no wonder therefore if they proceeding and coming from so generous a stock do assail the greatest beasts, and being endowed with a Lion-like courage, do fear nothing. The noblest Bees next unto these, are those that are generated out of the Bull, being also a strong and valiant beast, the excellency both of their disposition and bodies being equal to their stock and pedigree. The next are the Cow-Bees, or Ox-Bees, which are indeed very industrious, laborious and profitable, but of a milder disposition, and less inclinable to anger. The Calves cattle doth generate more soft and tender Bees, excellent makers of honey, but not able to endure labour, in regard of their tenderness, and in regard of the weakness of their matter (how lived). Some also do write, that Bees may be bred out of their own ashes sprinkled with honey, and laid forth in the sun, or some warm place, which sort may be called in Greek, *diether*, or Self-begotters. Bees of the best shape are small, variously coloured, round, and bending; the worst shaped are long. The difference of their forms and shapes ariseth from four causes; Nature, place, sex, and age. For some are domestick, or house Bees; others are wild or wood Bees, these delight in the familiarity and company of men, but not the other, which do exercise themselves in making honey in trees, clefts and crannies of the earth, and in the rubbing of old houses and walls. Again, some of the tame and gentler sort of Bees, do live in pleasant gardens, decked and beautified with all sorts of flowers, these are great, soft, fat and large bellied; others are kept in villages, going far for their food, and feed on flowers they light upon by chance. The lesser more hairy, yet for their work, industry and skill, they exceed the other. Of both kinds some are bred with stings (as all true Bees are) and others without stings, as the bastard Bees, which have a greater and softer belly, throat and body, but not famous either for manners, or ingenuity. They call this kinde of Bee the Drone, because they seem to

The difference  
of their shapes  
from nature.

be laborious, and avaricious; or because under the colour of labour (for they sometimes carry wax and diligently fashion their combs) they devour the honey. And these are of a black shining colour and larger bodied. Moreover some bees are defended from their Kings and Dukes, whereas *Aristotle* maketh two kinds. The yellow, which is the best, and the black streaked. Others do reckon three Kings, differing in colours, black, red, and spotted, or streaked. *Murcellus* doth report, that the divers coloured are an inferior sort of Bees; but those streaked and diversified with black, are the better. All of them are twice as big as other Bees. He that is called Monarch or King of the whole Swarms is always of an excellent shape and twice as big as any of the rest; his wings are shorter; his thighs straight and strong, his gate loftier; his aspect more stately and majestical, and on his forehead a white spot like a shining Diadem or Crown, differing much from vulgar Bees in regard of his shining colour. But the place both alters, sometimes their form, and sometimes their nature, sex also and age do change them in both respects. For in the *Molucca* Islands Bees are like to winged Ants, but somewhat lesser than the greater sort, as *Maximilianus Transylvanus* in his Epistle to the Bishop of *Salisbury* eloquently relateth: In *America* near the Rivers of *Yasser* and *Plate*, the Bees are not like ours, being no bigger than those small flies which trouble us in summer, they build their nests in hollow trees, and they make far greater combs and fuller of holes; the end or tip of their wings (as *Ovidius* and *Theophrastus* relate) seem to be bitten or cut off, in the middle whereof they have a white spot, and they have no offensive stings. The wax which they make is of a dusky pitchy colour, and they are for the most part evil conditioned. *Aristotle* lib. 5. *hiff.* cap. 22. mentioneth a certain kinde of Bee, that is of a soft indolent nature, which maketh honey twice in a month, being of a gentle pleasing disposition, and busied only in making of honey. Such there are also in the Countrey of *Pern*, which do make a soft and melting kinde of honey, which do stop their doors to close with wax, that they leave but a very small hole for their ingress or egress. But almost all our Bees in *Europe* are of a blackish colour, not so much in regard of the easie concoction of thin substance, than that they seem to be of a grosser diet, and of a thicker composition, and therefore the thicker matter doth remain within the skin; which the Bees of *Pern* and *Pontus*, by reason of their thin skins, and the fineness of their dewy nourishment, do easily thrust forth; unless that be the cause, we must ascribe the variety of colour, to wanton nature: as we do for white bears, and white black-birds; which seeing she herself is various and of many shapes, it is no wonder, since she delights in variety of colours that hath not made all Bees of one colour. The kinds of common Bees, (as *Columella* observes out of *Aristotle*) are thus distinguished; some are great, round, black, hairy: others are little, round, of a dark colour, rough hair: there are yet others lesser than they, and not so round, but more far, of a straw colour on their sides: there are some least of all, very slender, sharp, whole bellies are various coloured from yellow, and very small. But the blackish are most to be approved of, that are very little, round, lively, shining, gentle, having (if we credit *Virgil*)

*Their bodies shine with equal spots of gold.*

The greater Bees are, and fatter or longer, the worse they are: and if they be fierce and valiant, they are worst of all. But their anger is pacified by the daily company of their keeper, and of their minds they are made more tame with the only tinkling of brass. The Bees called *Chalcides* in *Crete*, from the place, are of a brazen colour, and something long, and are said to be very implacable and given to fighting, exceeding all others in their stings, and pricking more fiercely; so that they have driven the Citizens out of the Towns by their stings. And *Ælian* out of *Athenus* relates, that in the Mount *Ida*, the remainder of that race, dwell and make their combs. Such are also the Bees at *Carthage* like to Muskitoes. *Pappianus* writes in *Atticus*, that Bees are so gentle in *Halicanus*, that they go forth to feed amongst men, and wander where they please; for they are shut up in no hives; wherefore they make their works every where, and that so fast, that you cannot part the honey from the wax. They are smooth, shining, of variable colours, and not unlike to our good Bees. Lastly, since all Bees are by nature void of poison, yet the place causeth the long Bees, and the distastefull fashioned, about *Carthage* in *America*, to make venomous honey; where they collect honey that is infected with the contagion of trees, winds, air, and earth it self; and be it what it will, they lay it up in their cellars. Also Bees subterranean have another form and nature. For those that work in hives and trees, are greater, longer, softer, better winged, the difference of their bodies is more yellow on their backs and bellies. But they that are under the earth build in little holes, form from the and are short compacted, with black heads and forehead, hairy almost on their whole body; a place yellow down colour on their sides and rump, and that doth much adorn them. Of Bees, some finde themselves houses in woods, some are received into houses made of straw or horn; some civil and well nurtured Bees, who will not refuse the care of the Bee-master who hath skill, but will much love and delight in it. The prince of Philosophers confounds the sex of Bees: but most difference writers distinguish it: some say the females are the greater, and without stings; others say from them they are lesser and have stings. The founder Philosophers; (whose opinion I follow) acknowledge Bees to be males but their chief leaders, which are more strong, greater, more able, and always busy at home for propagation, and seldome go forth but with the whole swarm; whom nature hath commanded to be frequent in Venus occasions, and ordained them to stay always at home.



















it comes, and foretells forms and shewes that are at hand; when they are ready to come, they are sure not to fly far from their Hives; but will feed themselves with their own moisture. All those things being as they are, 'tis no wonder that *Aristeus, Philostratus, Aristomachus, Solinus, Mennius Sammiter*, and six hundred others that have wrote of Bees, have left the pleasures and delights of the City, and for 58 years to have lived in the woods, that they might be the more perfectly acquainted with their conditions and manner of life, and be the better enabled to commend them for an example to posterity. Neither was *Virgil* care the worse for being so well seen in their History, the which he hath most elegantly set down in the fourth of his *Georgicks*.

But what their bodies and their labours do work upon our bodies, it is now with the pains to relate; whereby we may assuredly know, that there is nothing in Bees but what doth serve for our health and welfare. For,

Their use in  
Medicine.

First of all, their bodies as soon as they are taken out of the Hives, and pounded and drank with some diuretick, or wine or milk; do strongly cure the dropsie, dissolve the stone or gravel, open all the passages of the urine, cure the stopping of the bladder. Bees that die in the honey, cure impotencies, and help the dulnesse of sight or hearing. Also being pounded together they cure the griping or wringing of the belly or guts, being applied to them. If poisoned honey be drank, they themselves being drank down after it, do expell it: they soften hard ulcers in the lips; being bound to a carbuncle or running sore, they heal it; they cure the bloody flux. Honey being strained with them, helps the crudities of the stomach, or specks or red pimples in the face, as you may see in *Hollerius, Alexander Bened.* and especially in *Piny.* Take Bees dead in the combs, and when they are through dry make them into powder, as *Galen* in *Euphoris.* writes, mingle them with the Honey in which they died; and anoint the parts of the head that are bald and thin haired, and you shall see them grow again. *Pliny* in like manner teaches to burn a great company of Bees together, and mingle the ashes with oyl, and anoint the part; only with this caution, that the adjacent parts be not touched therewith. yea, *Honey* scraped of Bees that are dead, he affirms to be very sovereign in all diseases, and very useful. *Bravio* in his 61. chap. de *Morb. mulieb.* tells us that their Ashes beaten with oyl is good to make the hair white.

Moreover, Bees are very profitable and useful in regard they serve for food to other creatures; as to the Bear, Lizzard, Frog, Serpents, Spiders, Wasps, Swallows, Houps, Robin-red-breast, Titmouse or Muskin; as *Bellonius* hath observed.

*Palladius* saith, that some men are wont to take great delight in hunting after them; and he tells you how you shall finde them out in these words. In the month of *April*, in sunny places, if the Bees do frequently resort thither, either for food or water, then certainly it is that their nest or Honey-shop is not far off, but if there come thither but a few in a company, then 'tis a sign that they harbour farther off. But when they come very thick, by this trick you shall finde out their Swarms, take a little wet Oaker and mark them on the back, and there remain, while those that were marked return back thither again; if they make a speedy return, then they make their abode not far off; but if they tarry more then ordinary, then they reside farther off. Now by this means those that are hardy may easily be found out; but to come at them that are more remote and farther off, do thus; take a piece of a Cane and cut it off at either end at the joints, and make a hole in the midst of it; there put in a little honey, or sweet wine boyled half away, and lay it by the side of the fountain or water where they resort. When the Bees come thither, and are drawn in by the sent of the honey, hold your thumb close upon the hole, and suffer but one Bee to go out at once, follow that as far as you can well discern him, when that is out of sight let go another, and by this conduct at length you will easily finde the place where the Swarm is. If it be in some hole or cavern of the earth; make but a smoke upon the mouth of it, and all the swarm will hurry out, and when they come forth, being a little scared, with the tinkling of a brass pan, they will hang themselves upon a little bough as if it were a bunch of grapes, from whence having a vessel to put them in, you may take them away. If they chuse to make their nest in the arm of a tree, then take a sharp saw and saw off the bough above and below them, and cover the middle part where they are, with a clean cover; then carry them where you please, and put them in a Hive.

By this Art you may finde their Swarms where they use in woods, dens, or hollow places, lony or craggy rocks, or any place whatsoever: only see that you begin your sport betime in the morning, lest the night overtake you, and you lose your game. Neither only are they delightful sport to them that hunt them in the day time; but also (if *Fabritius* and *Artemidorus* do not deceive us) if a man light upon them in his dream when he is a sleep; if he be a poor man, it foretells he shall be rich; if a King or a great man, that his subjects, or those that are under him will be loving and obedient. But he that dreams he had a flock of Bees, but in present hath them not, 'tis a sign of a decaying estate, and of some imminent approaching disaster to befall them; or to great use are Bees; and so variously hath damie Nature the contriver of all things, posted her self, or rather taught her pains indeed in furnishing them with such rare qualities of all sorts, as wherewith you have heard them to be endowed.

But to what purpose is (will you say) that sting, that stings against whose poison and venom, you have seen no remedy? Toonset, and experience teacheth us much, that Bees stings are sometimes

times venomous; but it is only of those Bees which are raving mad, or burning with some fever, anger, or hunger. Otherwise they do little or no harm at all; and therefore *Discofides* did not deign so much as to mention the symptoms of the stinging of Bees; supposing it a childish simple thing for any man to much as to complain of the stinging of a poor little Bee; later writers observe that the stinging is accompanied with redness and tumor, especially if the stinging do yet stick fast in the flesh, which if it go in very deep sometimes proves mortal, as *Nicanor* writes in his *Theatrica*. The Ancients (that we may prove the stinging of Bees to be converted to some good use) as *Swidius* reports, were wont to punish cheaters with them on this manner; They strip the malefactor stark naked, and besmeared his body all over with Honey, which done, and his hands and feet being bound, they exposed him to the heat of the scorching Sun, that what with the piercing bees beating upon his body, what with the stinging of the Bees and flies, and their often stabbing and wounding him, he did at length suffer a death answerable to his life. But if you would indeed resolve to go sting-free, or at least heal your self being stung; expell out of your minde, idleness, impiety, theft, malice; for those that are deli'd with those vices, they set upon to chuse as it were, and out of natural instinct. Beware also in especial manner, you wear not red garments, which might represent you to them, to be a murderer or man of blood; as also that you be not taken by them for an unchaste or unclean person, which it seems they naturally know and abominate (as hath been said before) They which carry the bill of a Wood-pecker in their hands when they come near them, although they do somewhat disturb their Swarms, yet (as *Pliny* saith) the Bees will not hurt them. *Nomius* reports, that if you rub and beat to powder the herb called Balm-mint, or Balm-gentile; their stings will not be able to hurt you. *Florentinus* gives in charge, that he that is to gather the honey should anoint himself with the oyl or juice of Marshmallows, whereby he may take away the combs without danger. But the juice of any Mallows whatsoever will do the like; and the better if they be rubbed with oyl; for it doth both preserve from stinging, and is a remedy to those that are stung. But be it granted that diseases be contracted by their stings; yet 'tis but taking a few of these Bees that are found dead in the Honey; and let them be carefully applied, and they presently cure them; and take away all the venom and aking of them.

What shall I say? God never created a creature lesse chargeable, and more profitable. They are bought for a very little money, they will live in all places whatsoever, even in woody and mountainous Countreys. The poor as well as the rich gain a great return or revenue by keeping of them; and yet need they not put more in the pot, or keep a servant the more for them. *Marula* reports that *Varro* rented out his flocks of Bees, for 5000 l. of Honey; and in *Spain* out of a little Village containing not above an Acre at most, that he gained of the Honey there gathered 10000 sesterces, i. e. 50 l. of our English money in one year. Besides all this, we have from their shops or store-houses, Wax, Bee-bread, Bee-glew, Rolin, Honey-combs such as no Common wealth can well be without; not to repeat their virtues, which are no less wholesome for the minde, then those are profitable for the body and maintenance of life. And first of all we will treat of Honey; that immortal, nectareal, pleasant, wholesome juice, and principal of all works and operations.

## CHAP. V.

### Of the Name, Difference and Use of Honey.

AT the first Honey had but one name, called in the Hebrew *Dabech*; but since that strange and confused Polyglottology, or speaking with divers tongues it was called of the inhabitants of *Arabia*, *Hel, Han*; of the French, *Miel*; of the Italians, *Miele*; of the Dutch, *Honich*; of the Germans, *Honig*; of the English, *Honey*; the Greeks called it, *uon*, from the admirable care and industry of the Bee in making of it, as *Eustachius* notes: from whence comes *uonius*, *Melissellum*, of *uon*, in Porphyry. This for the Name: But what it is yet after all is much controverted amongst the learned. Some there are that fondly conceit it to be the pittle of the The Deities; others of the jelly falling from the Stars; others, the purging of the Air, or the sweat of the on of Honey; and afterwards by expuition or vomit cast out into the cells or Honey-combs. *Aristotle, Pliny, Avicenna, Seneca*, would have the Bees not be makers of the Honey, but only gatherers of it: for thus they write: The Bees, (say they) do gather the Honey from the dew of the air, especially at the rising of certain Stars; and from the conjunction of the Rain-bow; for they make no Honey, but Honey-combs only. *Galen* also lib. 3. de *Alim. fac.* hath these words: I remember (saith he) not a time, in Summer we gathered a great quantity of Honey from the leaves of the trees, and then the Countrey in way of a plot sang, *quapier* rains Honey. But then the night before had been exceeding cold; as it could be in Summer by the strength whereof the sweet exhalations, and vapours being drawn up by the Sun were congealed together. Now with us this is a very rare accident; but in Mount *Libanus* it happens every year: and therefore they spread skins upon the ground

ground under the trees, and shake them; and the Aerial Honey that falls from them, they put up in pots, and earthen vessels. Now Honey, as all other things, do differ in substance or matter, it is either Aerial or Terrestrial; Aerial Honey is one thing, Terrestrial another: For in the months of *May, June, and July*, a kind of heavenly Ambrosia falls down upon the leaves of plants (which they call honey dew; but I rather mieldew) very sweet in taste, liquid, pure, and as sweet as sugar itself; this being gathered and drank in, the Bees I grant do ripen or bring to maturity, but that they make any real mutation, I constantly deny; unless perchance you will say that the refining the dew, is an alteration of the species. *Gal. lib. 3. de Alim. fac.* affirms that the matter of Honey is not the very dew itself, but something near of kin to it: the which Bees gathering do call up again into their cells, but they do not change the species of the juice; as *Avicenna* also saith. But this aerial dew, of which this aerial Honey is gathered is of two sorts; coagulated or thickned Manna; and liquid, of which the best Honey is made; especially if it retain the same virtue it had when it first fell: but falling from such a height, and even with the very sliding of the fall by reason of the impurity of the air contracting defilement, and being infected with the exhalation of the leaves, and juice of the flowers upon which it lights, it looeth much of that heavenly virtue, although some remain, and being so often shifted in the ventricles of the Bees, cells, honey-combs, it hath some strange qualities joynted to it. But in the beginning, Honey is like pure rock-water; and in the first daies it boyls like new wine, in the 20. day it waxeth thick, a while after it is covered over as it were with a thin film or membrane, which with the froth of the heat of it, coagles together. Terrestrial or earthy Honey we call that, because the dew going away, it is stuck out of the very sweat of the earth, and the sweeter part of the plant, of a thick substance indeed, and a quality answerable to that from whence it was extracted. And from thence it takes the name of Grass-honey, Bean-honey, Lilly-honey, Violet-honey, &c. respect being had to those things from which it is collected or gathered. But that Honey is best for substance, which is of a thin oily consistence, partaking of both, which doth of its own accord run out of the combs, (as if from oily consistence, partaking of both, which doth of its own accord run out of the combs, (as if from Greek called *Amellor*, or rather *Amellor*) and doth not abound with dregs, and is quickly boyled, and doth cast up very little or no scum; and always so tenaciously sticking together, that if you lift it up a good height on the top of your finger, it falls to the earth still homogeneous, unsevered, no way parted asunder, but remains in one continued flake, or line. And to conclude, that which if fire be put to it, will soonest arise in flame. Unless there be all these properties or most of them in your Honey, you shall discern the substance not of good Honey indeed, but of base, adulterate, impure trash.

The best Honey how known.

Accidental properties of Honey.

The Accidents or accidental properties of honey, are likewise some good, some bad, both of them are taken from the season, place, quality. If you respect the time or season, the newer the honey the better it is accounted, and the Spring or Summer honey far beyond that is gathered in Autumn. The first of these is gathered from flowers only, and those very tender and newly budded (thence called *Anthimus* or Flower-honey). The second is collected of nothing but herbs, and ripe flowers, thence called *Agrostis*, or Summer honey. The third, last and worst is had after the first Autumnal showres; and that very sandy or gritty and woody, gathered only of Heath or Ivie (which are then the only things green that are left) and from thence is called *Ericaceum*, Heath-honey or Ivie-honey: all which (as I said before) have their greatest commendation from their freshness or newness, because with long keeping and concocting, they wax bitter; from whence the Proverb, He that will make a good mixture of wine and honey, must mingle with new Hymetian Honey, old Paleman Wine. It is also better or worse in regard of the place whether proper or common. If you respect the proper place, or the vessel wherein it is contained; the best honey is still found in the bottome, for the dross which is contracted either by soyl of herbs, or by the air whilst it falls from so high a place, is cast up to the top as froth; and in the bottome it is found to be more glutinous, ponderous, luscious, and better compacted.

In what countrey the best Honey is to be found.

If you would attend the common place or region wherein it is gathered; according to the nature of the Countrey, so is the value of it.

In the first place and above all other, the *Attick Athenian Hymetick*, especially when made in the silver Mines, hath been hitherto adjudged the best honey, both in regard of the excellent nature of the Bees themselves, as also for that those Countreys do abound with Thyme and other choice plants and herbs, and likewise in regard of the goodness of the place where the combs are made. *Discorides* gives the next place, to the Islands of the *Cyclades*; or the *Agay Islands* (which is very luscious and pleasant, and welnigh as good as the *Attick*) And the third and last place to the *Hyblean and Sicilian*.

*John. Bauhinus* a very learned Physician, and surpassingly well seen in the knowledge of simples, saith that he saw of this *Attick* honey in *Verna* in an Apothecaries shop, which he found put up in the bladder of an Elephant, very thick, and weighing 21. pounds, of the length of two cubits, of the breadth of a cubit and a half. I suppose it was brought thither out of *Attick* for how should an Elephants bladder be had in *Athen*? In the judgement of *Cardanus*, that honey which comes from *Cephalonia*, an Island in the *Ionian* sea is the best; next to that in *Europe* is the *Spanish*, and that not without reason; in regard the dew for the most part in those hotter regions is better concocted: and (in all Countreys) where the purest air is, there is the virgin Honey (*i. e.* pure pale, and is made up as it is, having no need of fire to purge it. The *Tam-*

the honey is also commended, as *Strabo* reports. About *Tagedash, Melita, Hec, Halcara*, the Iron Mountain *Rhodus, Achædromus* to *Asiatick* there is very excellent African honey made, *Induricus Cadmus* prefers the honey of *Singara*, *Andreas Corisalm* the Mombaren, *Eodoras Barba* the Ethiopicks, *Thomas Lupinus* the Catharian, *Franciscus Alvarez* the Tigremahonien, *Sobhanian Baro* the Samogiticks, *Enricus* the Licuarian, *Strabon* the Rulian, *Theret* the American, *P. Iovius* is exceeding much in the commendation of *Mevo* honey, but not so advisedly, in as much as our Merchants, and *Sabah Baro* a very impartial writer of those things which are seen and done there, do very seriously affirm that in all the Dukedom of *Myso*, there are neither Bees nor honey. *Alberr. Camperius* in his history of *Myso* which is called *Brius*, saith that even in the *Hercinian* woods, there is extraordinary good honey to be found, and that altogether as good as the *Cecropian* or *Attick* honey may be. *Ælianus* affirms that in snowy and icy *Scythia* there is Countrey honey very praise-worthy; and that it is carried to *Myso* (where it is sold at a very dear rate). But if the heat of the Countrey doth add to the honey pureness and goodness, how is it possible such excellent honey should be had in *Scythia*, and *Samogitia*? Is it because the flowers there growing and receiving the dew are better then in other places, and by that means cause it to be clearer and purer? Or is it because of the North winds which are most frequent in those parts, which do purge the air? Or is it because as well Bees as men there are of more strong constitutions, and therefore are better able to do take more pains to refine and work the honey in their ventricles? which is the more likely, seeing they were not able to live at all in that cold region, nor could not arrive at such an Age (for there they live very long) if they were not very healthy and lusty of body.

Now whereas *Cardan* denies that there is any exquisite honey made in moist Countreys: let *England* and *Ireland* challenge him for their right; which being obnoxious to showres and very much rained a thing fatal to Islands, do yeeld such extraordinary pure honey, that it hath not the least mixture of venom, and doth last a long time before it be corrupted or purified; that we do not speak of its excellent whiteness, hardness, sweetness, hanging well together, viscosity and ponderousness; and other principal signs of the goodness of it; But let us leave off to commend our own Countrey wherein good is to be found; and let forth those Countreys which are infamous for the badness of it. For the extreme bitterness the *Cholchian* honey, and next the *Corsican*, and in some places the *Hungarian*, and the *Sardinian* hath an ill name. For in *Sardinia* Wormwood, What Countrey is *Corsica* Rome-lawrel, in *Colchis* the venomous Yew, and all of them in *Hungary*. Also the honey is venomous in *Heraclens* of *Pontus*; and in the flowers of Goats-bane, fading with the wetness of the Spring, for then the flowers contract that hurtfull venom; which doth presently infect the honey-dew that falls upon them. There is also another kind of pemicious honey made, which from the madness that it causeth, is termed Mad-honey; which *Pliny* conceiveth to be contracted from the flower of a certain shrub, very frequently growing there in the woods. *Discorides* and *Adrian* do not amiss impure this poison to be caused of great plenty of the venomous herb called *Libbardshane*, or Wolf-wort, which groweth there; in that it is cured with the very same remedies as the venom of that herb is. In *Carina*, *Perfis*, *Mauritania* and *Gerulia*, bordering to *Mallesia*, either by reason of vapours of the earth, or by reason of the virulent and poisonous juice of the plants, poisoned honey-combs are produced; but are desiered by their duskie or blackish colour. In *Trapezantium* in the Countrey of *Pontus*, *Pliny* reports of a certain honey that is gathered of the flowers of the Box-tree, which as it doth make those that are well sick with the noysome smell of it, so those that are not well it restores to health. On the trees of the *Heptocometanes*; a people near unto *Cholebis*, there grows a kind of infectious honey. The which poison being drank makes men stupid, and out of their wits. This was sent by the enemy to the three Legions of *Pompey* with a token for the desire of peace, they drinking very freely of it, were put both besides their wits, and their lives too (as *Strabo* saith). *Ovid* makes mention of the *Corsick* honey very infamous, being extracted from the flower of *Hemlock*, speaking thus:

I think it is: Corsick Honey; and the Bee  
From the cold Hemlock; flowers gathered thee.

But yet it may seem to be none so much for Dame Nature's honour, that she should bring forth a thing so detested of all men, as honey is; and so oddly to temper it with poison. Nay but in so doing she did not amiss, so to permit it to be; that thereby she might make men more cautious and less greedy, and to excite them not only to use that which should be wholesome, but to seek out for Antidotes against the unwholesomeness of it. And for that cause she hath hedged the Rose about with prickles; given the Bees a sting, hath infused the Sage with Toad-spittle; mixed poison (and that very deadly too) with Honey, Sugar, and Manna.

The signs of poisoned honey are these, it stains the honey-comb with a kind of Lead-colour, The signs of doth not become thick, do looks up a bright shining light, is newsharp or bitter in taste, and hath poisoned Honey a change and much smell, is far more ponderous; then the other, as soon as it is taken it remedies against it, causeth nausea, and a looseness of the belly, accompanied with excess of sweating. They which have drunk do tumble themselves up and down upon the cold earth, very desirous of refutation. The *Attick* honey is so pure that it hath the same sympotom with the poison of *Wolfsbane*, and









womb subject to fall down; and medicaments made up with it will last the longer. *Clodius* the follower of *Alexiphan*. The *Greeks* were wont to give the *Cyrenian* juice wrapt up in wax, to swallow it the better. *Celins Aurel*. It is also the ground of all Cerats and Plasters. *Myrsin* was the first that made a plaster without wax. It not only preserves the living, but it keeps the dead also from putrefaction, for which cause, as now it is used by us, to wrap up persons of great fortunes in wax, (as *Strabo* reports the *Perthans* were wont to do.) By a waxen probe hollow ulcers are best to be searched. The *Carthaginian* wax is the best for medicaments, the next is the *Punic*, which is very yellow, and smells like honey, being very pure. *Pliny*. Which thing I wonder at amongst honey that is venomous: the third in esteem is from *Cran*, which is from abundance of Bee-glew: the last is the *Corsick* wax, because it is collected from box, it is thought to have a physical quality.

Now follows the use of Wax otherwise. They that are rich, or sick, or great men, desire their candles to be made of it, by reason of the sweet smell. Also the use of wax is not small in stopping the chinks in vessels, for tents in the camp to keep out rain, for bed-ticks that the feathers fly not out, to joyn pipes made of reeds, as *Ovid* sang concerning the shepherds of old.

And with the Reed they waxed they play'd and sang.

Also the most excellent Painters painted with wax, as *Pliny* reports, and they adorned ships with it. This kinde of painting, though it were not hurt by salt, nor by the sun, nor by the wind, yet it was lost we know not how, when *Apelles*, *Protagoras*, and *Zenxis* died. Also the Ancients were wont to smear over their writing tables with wax before that paper was invented, as *Juvenal* describes it. And the younger *Pliny* in his Epistle to *Trinjan*; I save by the nets, there was no huncing pole or lance by me, but a style and writing tables, I did meditate and set down some things, that though I should have my hands empty, my writing tables might be full. Hence proceeded those old forms of speaking. In the first, second, third, or last wax. For *Suetonius* proves that the *Romans* wrote their Testaments in wax, in the life of *Caesar* in these words. He made *Q. Pedius* his heir to the last Testament in wax, in the life of *Caesar* in these words. Of this there are four principal uses of sealing wax little, whereby we seal letters and instruments. Of this there are four principal kinds, the *Punic* or white, the red or *Indian*, the black or *American*, the yellow or *European*. The *Punic* is made thus. The yellow wax is often laid in the open air, then they boyl it in sea-water, adding Nitre to it; then with skimmers they take off the flower of the wax, and they pour it into a vessel that hath a little cold water in it; then they boyl it apart in sea-water, then they cool the vessel. This is done thrice, and they then dry it on a bul-rush hurdle by day and by night in the open air, for this makes it white, the honey being drawn forth by the Sun, and the yellow colour breached forth: when it is dried they melt it, when it is melted they cover it with a thin cloth, and set it in the sun, after it hath stood in the sun it becomes exceeding white, being boyled once more. Wax is made white otherwise, but this is the most proper for medicaments, *Pliny*. I see that the *Greeks* speak of is no other than which *Pliny* calls the *Punic* wax. *Atius* speaks of white wax in the *Unguent Martiatum*, and *Paulus* speaks of it also. Black wax is either natural, as in the *Molucco* Islands and many parts of *America*; it is gathered by the Bees themselves (as we read in *Thevet* and in the Centuries of Navigations) or artificial, adding the ashes of pepper. Red wax or like Minium of *India*, is made with mingling Anchusa or Cinnamon. There is another kinde of red wax, hard like a stone, but easie to break, the Merchants think their letters sealed with this to be very sure; yet there are some knaves so cunning that they will open them and shut them again not hurting them, that no man can possibly discern it; which art, though a chief Impostor shewed to *Pennius*, when he was at *Paris*, yet he was too honest to reveal it to this mischievous age. The *European* honey is of the natural colour, that is, yellow. But the colour and variety of things hath bewitched us, that we are not content with natural colours, but we must imitate the *Punic*, *Indian*, *American* waxes, and above those we must have green, dark light, blew wax, made of Verdigrise and other paints, and some Turpentine.

*Propolis* the *Arabians* call *Kur*, the *Greeks* call it *gummi, colophon, cerasus, lupinus*, the *German*s, *Vorholz, niben Wachs*, *Wachs winden*, *stop Wachs*; the *Helvetians*, (if I mistake not) *Beis*, and *Blumen trost*; the *English*, *Hive-drops*; the *Spaniards*, *El venen de las colmenas*. *Scribanus* takes it for *Virgins* wax: *Ajloniens* falsely takes it for the dregs of the Hives: *Andreas Belschius* calls it the foulness of the walls, and says, that some abuse it for Bellium. Some maintain that *Propolis* drops from trees, others say it is the first comb. It is indeed a thicker yellowish mace, sweeter sensed, like to Storax, and dustie like Mastick, like to wax, but not yet made wax, whereby all passages are stopp'd against cold and rain. The third sort is that black matter, and sharp sensed, which *Aristotle* calls *Mittis*, *Gasa* and *Pliny* call *Commotis*, the dregs of wax: the second is called *Pissoceros*, as you would say, a matter made of pitch and wax. The third *Propolis* is of a middle nature between these two supporters and wax, laid very thick at the mouthes of the Hives, chiefly in summer; and therefore it is called *Propolis*, as you would say belonging to the suburbs. Because the Bees build with it at the doors before the Hive. *Propolis* (saith *Cordus* out of *Pliny*) perhaps is the same resin gum, growing upon the budding places of trees, which Bees gather and hang about the entrances of their Hives, to stop all chinks in winter against the cold. There are four sorts of it. The first is collected only out of the black Poppy, which they call *Aegyria*, that is, yellow it

is soft to be touched, and ticks like bird-lime, it smells sweeter and comfortable to the head, cauterizeth, and is like Storax, it tastes like Poplar buds, The second is gathered from the Birch-tree, and is of a colour between a yellow, ash, and green; it is soft and dustie also in handling. The third the Bees make out of the gum of the Poplar tree, called *Alpina*, but it is but seldom, and only in those places, where no other Poplar tree or Birch abounds, but only that is called *Alpina*. The fourth or mungled, is gathered and confounded from all these trees, so that it hath a mixt colour, scent, favour, and consistence. *Cordus* saith almost to much; now let us hear *Pliny*. *Propolis* is a kinde of middle substance between honey and wax; rather between wax and *Pissoceros*; and it seems to be gum collected by the Bees to stop up their hives. *Rondeletius* saith, it hath a thick substance, and the smell of leaven. *Pliny* saith, it smells so strong that some use it for Galbanum. But in the spring gathering time of honey, this part that shuts their cells may be separated, of which *Plutianus* writes thus: That the Bees laies a white foundation of his various coloured wax. So that *Propolis* seems to be a thick foundation for the wax. But it is now our use, nor can any man finde pure *Propolis*. For most Bee-masters taking out the Hives, when all the honey is run forth, whatsoever is in the combs they mingle together, and keep none pure by it self; nor is that wax which *Avicen* calls black Mum, any thing but the dregs of the combs, or else some sediment that sinks to the bottom of the water after the wax is boyled, and this is now *Propolis*; but *Propolis* is not pure, but some mingled matter. The nature of *Propolis*, is to dissolve in oyl as wax, but it is more ponderous and thick, and sinks to the bottome of it being melted, when wax swims on the top. Choose the sweetest, purest, not sophisticate with wax, which you may easily part by powring it into water. The best *Propolis* is said to be pure, most fragrant, without wax. That of *Crete* and *Pasidium* is the most effectual, the Bees collect the greatest part of it from the unctuosities of Storax and Labdanum; they collect it questionless out of other plants: for they make *Propolis* where neither the Poplar tree, nor Birch, nor any of the foresaid plants grow. Great is the vertue of pure *Propolis*, upon the gross spirits, and it draws faultily matter out from the depth. *Hollerius*. It is of the nature of wax, but it powerfully draws forth. *Dioscorid*. *Celsus* placeth it in the number of biring remedies, saying that it digests and moves matter in ulcers. *Atius* says that it heats, dissolves, ripens, cleanses, attracts. The cleansing force is not very strong, the attracting is strong enough, it is of thin parts, it heats in the second degree complete, or in the beginning of the third: you must first soften it with your hands before you mingle it with other medicaments, and then taking the rest from the fire, put it in and boyl it, for it will not well endure any boyling at the fire. It draws out thorns and all splinters that are within. *Atius*. *Varro* saith, that for its manifold uses it was fold dearer in the market than honey. May be therefore *Propolis* was called holy wax, because of *via sacra* where they sold it at *Rome*, as *Largus* writes in the cures of hard swellings. They draw forth thorns and such bodies sticking in the flesh, with runnet, (especially of a Hare) powder of Frankincense, and *Propolis*. *Pliny*. It helps an old cough with its smell. It cures the tole with water, and roots out ringworms by anointing them. *Dioscorid*. It cures *Oxanas*: *Scrapio*. *Pliny* l. 11. c. 7. tells of more of its Physical uses.

*Aristotle* calls *Erihaca Sandarachas*, others call it *Cerinthum*, and *Smerion*, l. 2. *Aristot. de Plantis*. The learned call it *Vernilago*; some from the time of the year, *Vernix*; this Glew, saith *Niphus*, the country Lombards call *Carbina*, but ours *Taram*. It is the meat the Bees make, which they lay in the void spaces of their combs; it tastes bitter, it is made of spring dew, the juice of trees, and sometimes of gum. That of *Africa* smells little; that from the South parts is blacker; from the North is better and redder; there is much from the *Grecian* Nut-trees. *Meneceus* saith it is a flower, that sweets the future harvest. *Plin*. *Varro* saith, it is not neat, but glew, whereby the Bees fasten their combs at the ends together. It forcibly calls forth the swarms: where they would have the swarms light, they anoint a bough with *Erihaw*, or any other place, adding balsam. *Virgil*, I think, following *Varro*, calls it glew. *Myrsicommotis*, (*Stephannus* calls it *xvovs*) and *Pissoceros* cures strokes and ulcers. *Aristotle*. What use it hath in the hives, we said enough before.

## CHAP. VII.

### Of Drones and Theeves.

THE Drone called in Latine, *Fucus*, is called in Greek, *κρόν* and *δρόν*, in the Illyrian tongue, *Czaro*; in English, a Drone, a Dran; in High Dutch, *Tranen*; Low Dutch, *Besonder* *strot*; in Spanish, *Zangano*; in Italian, *Ape che non fa mele*; in French, *Bourdon* and *Fulton*; in the Hungarian tongue, *Hergo*; in the Polonian, *Czechen*. The word *Fucus* a Drone, is derived as some think from *fur*, which signifies a thief, because privily and by stealth he makes prey upon the honey: although with more probability the word *fucus* may be so used, because he doth cheat and cosen the Bees, and under colour of keeping the Hives warm, (which is his office to do) he unlocks the combs. And for that reason, some with too much confidence, perhaps, derive the Latine word *fucus* from the Greek word *φύσσω*, signifying to eat or devour; others will have it come *afuendo*, in regard of their sitting upon, and nursing up the young swarm.













twenty seven strokes they will kill a Man, or a Horse, especially in the Dog-dates, at which time their nature is more hot; and men are more weak by reason of the abundant exhalation of the spirits. No wonder then that in sacred Writ they are compared to most cruel enemies, *Exod. 23; 28.* So *Ovid. Metamorph. 11.*

*Arif. H. 1. 9.*

*Arif. H. 1. 9.*

*c. 4.*

Their place and dwelling.



*Spicula Crabronum ardentia*, the fiery darts of the Wasp. And *Tygit* in the 4 of his *Georgicks* calls them *asprimo*, very sharp. *Terrence* in his *Phormio* Plants in his *Amphitryon* use that Proverb, *Irre-ravi Crabrones*, I have stirred up a Hornet, to shew the nature of women when they are angry, the more you strive with them, the more you provoke them; and at length go by the worst. Now as amongst Bees both the Drones and the Kings or Master-bees have no stings; and also some Wasps, (as we have said before) so amongst the Hornets there is not one but hath, both those that are in trees and those that are in the ground, not so much as the Captain or Master Hornet but hath one. For the Hornets as well as the Bees and Wasps have their Commanders or Master Hornets, what ever *Pliny l. 21. c. 11.* dreamt to the contrary; only they are bigger than the rest according to the proportion of Hornets to Hornets, then Wasps are to Wasps, or Bees to Bees. They do also remain within doors as the Master Wasps do, but they never breed but one Master Hornet of them in a Nest, for fear of tumults and taking of parties; but as they are very troublesome, and fatal to those that from without annoy them and seek to spoil them, so they are very strict in preserving domestic peace and quiet, and in keeping of mutual society one with another, and in providing for their young they do even outstrip the Bees themselves; for they never quarrel about priority of place, nor distract them with diversity of employments, nor make a stir or tumult about the election of their Chieftain or Master Hornet, but all have one and the same employment, and they all die together, whatsoever prey they take, or small creature they kill abroad, they carry part of it home to their fellows, and young ones.

Neither do they every year send out and expose to the wide world their young ones as the Bees do (and for which they are censured as in that respect unnatural) to finde out an harbour where they can for themselves to dwell in: but all their new brood they nourish and bring up in their own bosome, and as need shall require build more and bigger nests to keep them in. As for their King or Master Hornet (whom also they dearly love and respect) such a one they have that doth appear not to want power to command, but occasion to exercise it. Only he excels the rest in courage of mind and bignesse of body (as it is usual for Princes to do) for he is more fierce than any of the rest when he is to encounter with foreign enemies, as he is on the other hand most milde and gentle to his subjects at home.

Habitation.

The Hornets make their nests under ground; casting up the mould as the Pismires do. For neither they nor the Wasps send out young swarms as the Bees do (as is before said) but as the young are bred there they remain, and so they dig their nests bigger and bigger, as the family grows greater and greater. They make their nests exceeding large; we took 3 or 4 baskets full of combs of the lustier brood: they have very little or no honey in their cells; a drop or so where their young are.

If any of them chance to wander from their nest, they gather themselves together into some tree, and there make their combs in the top, which oftentimes are easie to be seen, in which they procreate one King or Master Hornet, who when he is grown up leads away the whole troop and provides them a nest with himself.

L. 11. c. 11.

The wood or wilde Hornet (saith *Pliny*) live in hollow trees all the winter, like other Insects they lie hid they live not above two years. Their sting is seldom without a fever, catch a carbuncle tumor, and exceeding great pain. They build their Nests far more artificially than either the Bee or Wasp, sometimes in the hollow trunks of trees, or else under their roots in the ground, which they make bigger and bigger according as their family increaseth, and curiously plaister over with a kinde of slimy spittle gathered from gummy leaves. The mouthes or passages of their cells are never upward, but altogether downward; and they very providently place the bottom of their cells upwards, that the rain may not pierce through them, or lest otherwise they should be exposed to the extremity of wind and weather where the head above. All their nests in a manner are exactly 6 square, the front or outside whereof is beset with white and rusty iron coloured segments; and the matter of them is membranous, much like pieces of Beech-bark. When it is rolled together and shrievel'd up with heat. Whilest *Pennius* was at *Peterborough* in *England*, he saw in the wide and open street a Hornet pursuing a Sparrow, whom when he wounded with his sting, he fell down dead to the ground; and with the admiration of all that beheld them, he suckt out and fill'd himself with the blood of the slain prey.

Concerning the Copulation of Hornets *Arif.* knew nothing of certainty, as neither from whence nor how they are bred. But for as much as they do for certain lay their young at the very sides of their cells, as Bees and Wasps do, it should seem after the same manner they bring them forth. But if they do couple, they do it, in the night, as Cane do, or in some se-

cret places, out of all possibility of being seen; where *Argus* himself should not espie them.

The Hornet doth not feed on flowers, but lives for the most part on flesh: and rather then fall oftentimes they will stoop to dung and excrements. They hunt after great flies also and the smaller birds, which when they take, they first wound the head as the Hawk doth, and then pluck it off and fly away with the rest of the body. In the winter they die many of them: because they do not as the Bee, lay up provision beforehand, but only live from hand to mouth, regarding nothing but their present necessity. *Arif. l. 3. Hif.* Moreover, as *Landius* observeth, they watch about the Bee Hives; and getting on their backs use them in stead of a Couch or Chair to carry them; for when the poor wretches strive to fly away, they carry a most cruel rider on their backs, who when he hath suckt out all the juice that is in the Bees body, is the most ungrateful of all winged creatures he kills and eats up him which supplied his hunger. Also all sweet things whatsoever the Hornet will feed on: insumch that I have seen him with mine own eyes to eat of grasse worms. But the *Indian* Hornets have such a vast appetite (as *Ovidius* witnesseth) that they will light upon Oyl, Butter, Cakes, Sawce, and all liquid things whatsoever; not sparing napkins or table-clothes, which they will confumate and defile with their filthy excrement, and laying of their slimy eggs. Now as they feed upon what they got from others, so they do not want one to prey upon them likewise. Above the rest the Brocks, who about the full of the Moon enters their dens or nests and destroys both house and family. Nor are they food for this useful fat creature only, but they serve the countreyntes by way of prognosticks, to foreshew the alteration of weather; for if toward the evening they are seen to fly about in greater store then ordinarily they are wont to do, it is a sign that the next day will be fair and hot: but if about twilight they often enter into their nests as it were to hide and shelter themselves, then expect rain, winds, and stormy weather to ensue. Upon which *Avienus* thus:

So when you see troops of boarfe Hornets fly,  
Late as the end of Autumn, they forebode,  
When first Virgilius stirs the evening sky,  
That storms at sea shall presently ensue.

Moreover whereas the same Medicines that cure the stinging of Wasps, will prevail also against Remedies against the stinging of Hornets: yet as *Aggregator* hath taught us, a Hornet is the Bezoar stone for its own sting, the wound laid on with *Potash*, Oyl, or One dung; Also Bole, and all fat earths are commended, such as *Bacchus* applied to *bald Silenus*, who was stung with Hornets, whilest he rifled their nest for honey supposing they were Bees: *Ovid.* describes it neatly in 3 *Pastor*:

Thousands of Hornets his bald pate torment,  
And with their stings they wound his ugly face,  
He sals and cries for help, a foul disgrace;  
What remedy, it was too late for to repent.

When that the Satyr came, or found poor Silenus,  
His face all swollen, and bawling on his knee,  
They could not choose but laugh; *Bacchus* said thus,  
None is with Mud, it prov'd a remedy.

He that desires more remedies against the sting of this Hornet, may finde of them plenty in the story of the Wasp. For Authors do seem to make them all one, only with this difference, that in this case they ought to be given in greater quantity, and the use and application of them longer continued.

Now let us proceed to the Insect called Tentredo.

Whether it ought to be called *tribulus*, *tribulus*, & *tribulus* according to *Aristotle*, or *muphidi* in *Alekip*, according to *Nicander*, let Philosophers judge; they seem to me to differ only in name and bignesse. For whereas the Scholiast of *Nicander* calls it *infistum repens*, is an Insect like a Wasp, I do not weigh that, when as ever and anon, by Poetical licence, he calls the Wasp, *apem Crocum*, a yellow Bee. What name it hath in other nations I know not, and (to say the truth) nor know I the little Beast it self. Only this I finde, that Authors describe it to be in colour like a Wasp, likea Bee in bulk or bignesse, and in communication of labour like all other facial winged Insects. He is very sawcy, loves the kitchen well and fish, insumch that some think it should be written *tribulus* in stead of *tribulus* in the text, because it is given so much to *Licorissine*, *Hafchius* calls it *apem pium*, a wood or wilde Bee. *Hermolus* thinks they should rather be called *tribulus* or *tribulus*, rather than *tribulus*, as he saith it is corruptly read in *Aristotle*. He makes his nest in the ground as the Wasp doth, with many rooms very large and handsome. *Pennius* will not by any means yield that the *Pemphredo* should be the same with *Tentredo*, For the *Pemphredo* (as the Scholiast of *Nicander* describeth it) *Edo in magnam pulvis*, and a *tribulus* *viam*, i. e. the *Pemphredo* is very like the Bee, but the *Tentredo* like the Wasp. But yet notwithstanding the Scholiast forgets himself; who writes also of the *Pemphredo* after this manner: *Pemphredo* is an Insect like a Wasp, it hath a sting, is greater than a Pismire, but lesse than a Bee; it hath wings, and a various colour tending to black; in fair weather it gathers sustenance from the shrubs in the valleys, then it flies and laies it up in the hollow oaks.

This Insect haunth woods and mountains, gathers honey juice from flowers, and layeth it up

Kkkk











strong sent, which like the Moth it loseth with the life. A great frequenter of gardens and sitting on Elder: whether he come of a Caterpillar, as the Butterfly doth, or out of the worms of trees, I cannot tell. That most learned and courteous Gentleman *Jacobus Camerarius* first shewed it to *Penninus*.

There are sundry sorts of Flies, of the Greeks called *μύγες*, in Latine, *Pilicanda*, *Scicanda*; in English *Hair-tails*, or *Bristle-tails*. For some of them have one, others two, other some yet three or four bristles in their tail: of which in order.

The first of these called *Hemithrix* or *Unifera* is a fly that hath a tail, the whole body is black except the middle or the back and belly that are red; it hath two silver wings, the shoulders thick, with two little black tail-yards, and a long bristle shot forth of the tail of it. The figure of

this Fly did the above-said *Jacobus* send to *Penninus*, withall attesting that it never offered to light upon any other herb but the chiefest *Amor. Officinalis*, are two Flies that have two hairs in the tails of them; whereof some have bodies sharp or piked at the end, others more blunt. Of the former sort, two I have seen with four silver wings without spots, head and shoulders blackish, the rest of the body dunnish, be-decked with divers crooked lines of black. Both these had long and slender tail-yards, and the like in the tail, only somewhat longer, the body big and bulky. Those of two hairs or bristles are of five sorts: the

first in all things like those with a hair, but that these are almost all over yellowish; it hath two very long bristles in the tail, one of which being stretcht out at length is like the tail of a Greyhound running after a Hare; the other rivelled inward is like a spiral line. The second sort, is a kinde of long Fly, having four silver wings, yellowish feet, the body black, shoulders thick, two tail-yards long and slender, the belly toward the tail, bigger then the rest, out of which two short bristles do issue, turning upwards; it lives in hedges. The third of these *Carolina Clusius* sent from *Vienna*, with a dusky dark coloured body, the wings large in a mixture of blew and silver colour, the tail acumined or piked, out of which grow two bristles or plumes rather (as *Penninus* observes) of a Partridge colour speckled, with black and dunnish spots intermingled. The fourth kinde is of a round orbicular body, about an inch in length; the head, shoulders and breast very black, the horns short, it hath six black feet fastned to the thick breast, the foremost shorter than the rest, the hindmost the longest: when she flies she puts her feet together and lets them hang down, it hath four darkish wings of a silver colour, her eyes black and shining, the utmost tip of her tail black, out of which peep two very short bristles from the shoulders downwards to the middle of the tail; she is almost of a yellowish colour; the tail is joyned to the shoulder as it were with a long thread: it runs very nimbly and as it were leaping; her nest is under ground, she feeds upon small Flies and Caterpillars. The fifth and last sort of these, is by much the least, yet of the same form and figure, only it hath very bright silver wings; the whole body to the tail is of a tawny or darkish red colour.

Of those that have three hairs or bristles there have but 5 sorts come to my notice. The first hath a body very long and black, the middle very red from black, with two black horns in the head, filled

with a blackish spot, the thighs or shanks reddish, in the tail it hath three long hairs or bristles, and flies very swiftly. The next is like to this, but lesse, all over black, longer than the former, thinner and slenderer; it hath silver wings also, the comicles or horns all one with the former, it also thrusteth forth three long bristles at the tail, not so swift in flight by much as the former. There is another of this kinde all over whitish, but only the wings, which are spotted with four black spots; the utmost of which are larger, the others shorter, which



so long as the flies not, stand bolt upright: she hath six feet, the four lesser of them fastened to her body, the two foremost are greater and black, coming as it were out of the neck, between the two black round eyes which standeth forth of the head come forth two black short horns; the body thin, round, long, about a fingers breadth; in the tail are to be seen three bristles as long as the body, the which when she flies she puts into the form of an exact triangle. In the homeths of *May* and *June* being, and after rain she is to be seen; she flies ordinarily about rivers with some company with her, with whom she seems to sport her self by the way; she useth her forefeet sometimes to feel whether anything lie in her way, extending or stretching them forth in manner of little horns. Such as this *Penninus* took notice of in the year 73.

The fourth of these is of an admirable structure, it hath two silver wings, the body black, the mouth forked, and Eagle-bill'd, in the forehead prout out two little short horns, it hath only four feet, two under the breast small and short, the other two a little below firm and strong; out of its tail which is very long issue two very short bristles, and between these, one of a great length and blunt at the end. This kinde of Fly *Penninus* remembers that he saw only once about *Hunningham*, sometime a fort belonging to the Earls of *Oxford*. The last of all both body and tail is all black, it hath a very long body, two wings somewhat shorter then the body, the feet of a reddish yellow, the tail altogether as long as the body, seen only once of *Penninus* about *Greenhills* in *Kent*.

The Fly with four hairs represents the first of those with three hairs, only its tail is somewhat bigger at the latter end of it, the feet as also the horns black, the wings long, the outermost three times exceeding the innermost in bignesse, having a black spot in the middle, and in the tail four hairs or bristles.

To these are to be reckoned those Flies called in Latine, *Mulles*, *Pavones*, and *Libelle*; which the Greeks from the likenesse of a fish of that name called *εὐκαλα*. In English they are called *Adonis*, *Boats*, *Dragon-flies*, and *Water-butterflies*; because they are seldom seen on land, but always about waters, as rivers, or fens. The Italians call them *Crostoni*; the Hollanders, *Rondouls*; for the form or shape of their bodies they differ little or not at all, but only in colour; some of them have bodies two inches long, long and slender, withal, in form of a pipe or corner: and these consist of three parts; the head, breast, and the rest of the body which is in head of a tail. The head with two great goggle eyes, of the same colour with the rest of the body, is made fast to a very short neck to which the forefeet are joyned, all the rest being annexed to the breast. The hinder feet likewise are the longest, the better to lift up and stay their bodies. All of them



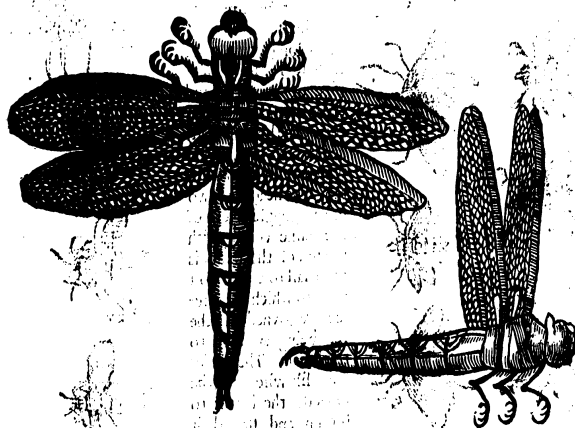


have forked tails, and with these they couple, remaining long in the act of generation. Countrymen for the most part of them, are of opinion that these Flies are engendered out of the worms that grow from the water-bulrush putrefied; which if I should yeeld to be true, yet doth it not take away copulation, and putting forth of worms from their own bodies, whereby they might from time to time increase, and perpetuate their propagation.

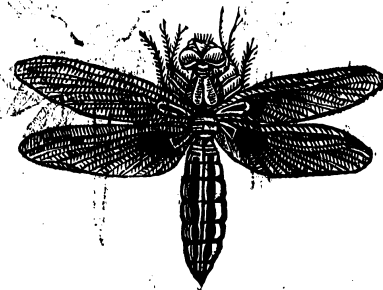
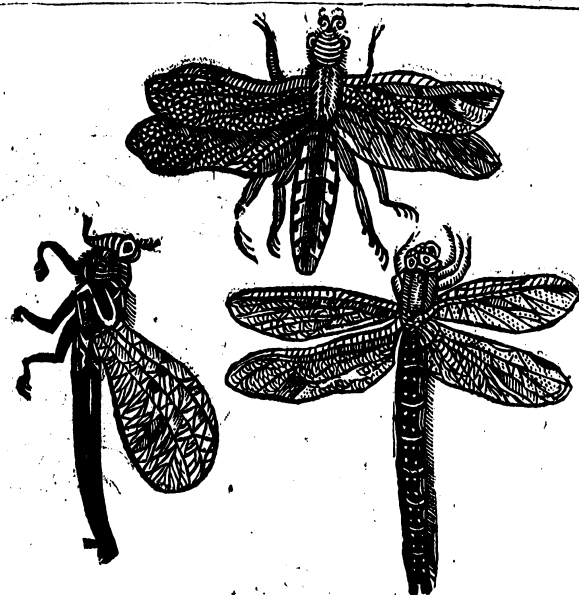
The lesser of them are very slow of flight, the greater very swift, and are only to be seen in heat of Summer. Of these we have observed three sorts or species: The greater, lesser, and least of all. The biggest of all, some of

the English call *Brises*. Of which sort eight only have come to our view. The first greenish like spots also in the neck and tops of the sides of a dark green; the wings silver coloured they are swift and make great speed in their motion. He hath seven black lines athwart the back, and feeds upon flies like the Swallow. The second is like to this, but of a more dark hew. The third hath eyes like to pearls, silver wings, the hem or extremity whereof is stained with a dusky spot, the body is black, but very seldome yellowish on the back and belly; the tail black and forked, adorned as it were with two plumes. The fourth is of a muddy colour, having the sides divided as it were into six parts; near about the coming forth of the wing which are like silver, you may perceive a large black spot, distinguished in the middle with lines of mud colour, toward the end of the tail there appear four or five hairs or bristles. The fifth hath its head and tail gray, the mouth black; the silver wings marked with one spot, in the end of the tail it hath three bristles in manner of a Trident. The sixth is silver winged, with a black spot in the middle, the body all over black; the back and belly sometimes, but that seldome of muddy colour, the breast and

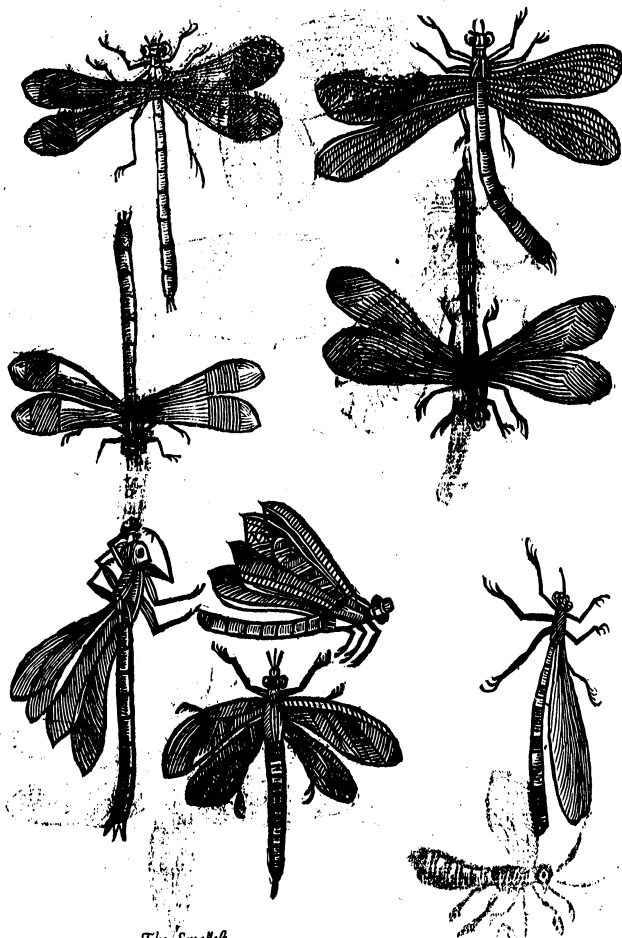
The greatest Libella.



shoulder



The Mean.



The Smallest.



shoulders half black, half yellow, under the end of the wings two hooked bristles at the end of the body very small. The middle of the neck, and shoulders of a pale yellow colour, the rest of the body black, as appeared in *Pemphix* study of a little worm that we never had seen before. The eighth shorter than the rest, with eyes like pearls, the body all over of a yellow colour, except where it is thwarted with cross streaks or lines; the tail seems as if the end were cut off, the but end thereof more broad, the extremities of its five wings are darkened with a black spot, they are to be found most commonly amongst the com.

The middle sort of the *Libella* do

forth Nature's elegance beyond the expression of Art. The first is of a most curious colour. The body blue or sky colour, the wings of bright violet colour, the space between the shoulders is adorned with four golden genis, set as it were in a blackish collar. The second hath the head and body gray, the wings whitish, which are beautified with gray lines drawn quite through them, in the middle they are of a purple colour. The third hath its head and body of a greenish colour, the lines of the wings are marked as it were with bloud colour streaks, towards the edges or our most parts like to a dark purple. The fourth seems to be all over of the same colour, to wit, of a dusky colour mixt with a pale green. The eyes of the fifth are blue, the head green, the whole body mixt of green and blue, except the wings which are most accurately wrought with silver colour and black, in the middle adorned with a dark purple. The sixth is all over green; yet and the wings themselves are of a light green.

I have seen four of the least sort of the *Libella*. The first the body all over of a bright blue colour. The second red, the wings all over of a silver colour. The third yellowish, but the tail more thick; the edges of the wings (as also all the lines that run along them) are red and marked with a bloud colour spot. The fourth which is the least of all, hath a long spiny tail, a great head, blue eyes standing out with two little horns to guard them; the body somewhat long, slender, underneath greenish, above blackish, on the back it hath two greenish lines or streaks drawn along from the head to the end of the wings, the tail bound together with five joints or knors, in the end whereof is a ring of bloud colour.

One there is of this number which is called *Libella* some of the other bigger very speedily: of a thin gray coloured body, and the wings all over of a silver colour, and when he creeps into an apple, no hole can be seen where he went in: he feeds also upon seeds. This Fly *William Brewer* a learned man and an excellent naturalist sent to *Pennins*. There are found in the leaves of young *Fennel* Flies of an exceeding smallness, inasmuch as sometimes they are so little, that they are not able to be seen; they run and fly very swiftly, inasmuch that you would wonder how it were possible for nature to fashion feet and wings to such very exceeding small bodies.

*Water Flies*, of the Greeks called *limn*, or *Lachrye*, as abiding in stony places, are those that feed upon things that swim upon the surface of the water, and that live especially upon the water, as these and the like, *Phryganea*, *Macronema*, *Tigridina*, *Aschna*, *Lutaria*, *Falsen* &c. *Phryganea* comes from the little worm *Phryganea* (which in English is called *Cados worm*) living in the waters, and in the midst of *Angels* ascending to the top or superficies of the waters; it hath four wings of a brown colour, the body somewhat long, having two short horns, the tail forked, or rather bristles coming out of the tail. The form or figure of this Fly is various, in regard of the great variety of those little *Cados* worms whereof they come.

Among the *Macedonians* about the River *Austrum* which runs in the midst between *Beroa* and *Thessalonica*, there fly a kind of Flies, which are not every where to be found, neither are they any way like other Flies, they are neither like the Bees, Wasps or Hornets, yet resemble all in something, in bignesse the *Hornet*, in colour the *Wasp*, in humming the *Bee*; in audacity and boldnesse all the rest of the Flies; the country people call them *limn*, the Latines *Equiset*; these flying upon the surface of the waters become a prey to the fish that are in the river. The greater summer *Water-Fly* is seen in *Helvetia* in the month of *May* (commonly call *Tes glaffi*) as we have heard reported by a Gentleman, but which we leave to those of that Country to describe. The *Aschna* so called, are a kind of *Water-fly* of an ash colour, with four wings, six feet, near the tail having as it were many downy hairs. The *Water-fly* called *Lutaria* is of a yellowish dun colour, it hath long wings, always standing bolt upright upon the shoulders so long as it flies, the eyes big and standing out of the head, the tail long and knotty, having two long hairs or bristles at the end of it; she is conversant always about rivers, seldom elsewhere, especially after rain. There is another of a dun colour with four long wings, and long stanks, the body full of joints, two long horns it carries in the forehead, the head little, the eyes blackish and standing out of the head, the wings plain, but a little more bright than the rest of the body. For the most part found in woods adjoining to fens and standing waters. To conclude, I shall relate amongst the rarer sort of Flies, that of *Cardanus*, as he himself describes it. Thus: I have faith he a little creature like to a Beetle, of no unfavoury smell, soft, and the swiftest of all that are I knew of Insects, it is of a dark yellow, not black, with six feet, and two very short thin wings not covering the tail; the tail is of the same figure and form with the head, inasmuch that you would think it had two heads; for as it hath a mouth in the upper part of the head, and two small comicles there under the chin, so it hath two others also in the lower part longer than the creature itself, as many likewise in the tail, but these shorter than the two longest in the head; only the uppermost of those are longer and thicker than the lowermost. Which rare creature I with I had seen with *Cardanus*, than I might have been added to this description the figure of it. There is also another of a *Water-fly*, which men call from the length of the feet or stanks of it, *Tigridina*, *Macronema*, *Pedonema*, *Gravium*; called therefore in English a *Cran Fly*. Of these Flies, are found four sorts. The first spotted with long stanks like a wood Spider, the body almost all of a whitish ash colour, silver wings, black eyes sticking out, with two very short horns, the tail pointed or piked, it flies (much like the *Libella*) hopping with the feet, sometimes it flies, in the summer (but not for long). So greedy after the lights, that it







Mole-heaps newly turned up; for it loves the ground that is made plain and smooth with treading on, and therefore called in English the *Grasshopper Fly*: it seldom comes upon flowers, especially at what time the Mole casts up fresh earth, of the juice whereof it is sustained.

Of the *Herbivora* or those that feed on herbs or flowers there are divers sorts or species; whereof three are like the Bee termed of *Lucian* *spilanthus*, military or war flies. In regard they are bigger, lustier, and stronger, very specious to look on, very gallantly let out with two silver wings. The first and chief of these hath a blackish head; the middle of the back being cruciform with two overthwart lines, the end of the tail black: the body otherwise mud-colour'd. The second not much unlike, the head blackish, the shoulders according to the length of them drawn with three yellow and black lines, the rest of the body marked alike and with the same colours. The third and least of these, the shoulders are rough and yellow, the head red, the rest of the body is divided with four yellow and four black lines going across it. The bodies of all of them do glitter, and as if they had nothing in them are transparent. They are comelier in gardens, sucking the juice of the flowers. *Lucian* describes these military flies thus: There are a kinde of Fly which some call Military, others Dog-flies, that make a very harsh and shrill noise, and fly exceeding swiftly. These are very long lived, and continue all the winter without meat, especially when drawn together, and fastened to ridges and tops of houses.

In whom this is most worthy of admiration, that both of them do the natural office both of male and female, like the Son of *Mercury* and *Venus*; who was of a mixt nature or *Hermaphrodite*.

Much like to these is there another Fly called *Apidae*, of a shining black, having two wings, gathering wax, and fastening the juice that he hath gathered from the flowers to his hinder legs, as the Bee doth: He comes abroad in Autumn, and is seldom seen at any other time. Whence this he that which *Arist.* calls *Sirius*; it differs certainly in the number of wings only, for that he makes to have four wings, whereas Nature hath afforded this but two.

There are other sorts of Flies, that devour herbs and flowers, that are not like Bees, to wit, the *Struthiopteris*, *Erimopteris*, and *Chelidoniis*, because it is like to the Swallow. Of the *Struthiopteris*, I have seen three sorts. The first whereof is tender and soft, six footed, with two wings, the belly longer than ordinary, sending forth from the head a little above the eyes two feathers like Ostriches feathers, as it were horns of a downy softness, as soft as any feathers whatsoever; the crump shouldered, all the rest of the body white, longer than the wings which are black. The second is of the same colour, whitish, the head of a dusky colour; otherwise it differs little or nothing at all from the former. The third is all alike, only the horns are not so soft and downy; the tail is white, the body long, with five white lines going athwart it; the feet long, marked with black and white colours: as it goeth it lifteth up the tail a little, and softly claps his two transparent wings together. These three species do appear in the Spring time with the first in gardens, hedges and shady places very frequently before and after rain.

The *Erimopteris* is a fly all over white or rather silver colour, small and every where downy; inasmuch as when it sits upon a flower, if you look not hard upon it, you would think it were a feather; the wings of it are divided, the feathers being severed one from the other almost like Birds wings. *Pennius* received one of these painted, from *Edmund Kniver*: afterwards he often saw them in hedges, and places far with privet.

The Fly called *Chelidoniis*, is swifter of wing than all the rest, sides, tail, head, brown and hairy, the eyes black and hanging out, the bill or rather the nose picked, out of the top of which start out two horns; the top of the shoulders as also the back black, two silver wings the forepart whereof do answer to the blackness of the feet: sometimes it sits in one place for a great while together, as if it were unmovable, but as soon as you come near it, its out of your sight before you can say, What's this? and will not yeeld a jot to the Swallow (from whom it hath its name) for swiftness of flight. *Pennius* received another flower-Fly of the learned *Carolus Clusius*, black-headed with two silver wings, two dainty white eyes in the back, having seven yellow spots, in the midst whereof is to be discerned a speck of purple. There are Flies that are found in beans, of sundry colours, but especially of a pale purple, which I conceive do come of the small worms called *Mida*. For when they are gone (which is in the midst of Summer) suddenly there comes forth a great number of those Flies (swarming amongst the Beans). The Fly of *Napellus* I have not seen, but those that come out of those black grains that stick to the stalk of the wormwood; much less than Miller seed, more black than any Moor, only famous for their wonderful smallness.

There is a certain Fly called *Ischura*, very rare and wonderful, whether you respect the form or the shortness of its life. It hath many names: *Alian* calleth it *Ischura*; *Hesychius* *Ischura*; of others it is called *Ischura*; in Latine, *Diaria*: it moves with four wings and as many feet; for that it hath not peculiar to it in regard of the shortness of its life only (saith the Philosopher) but also as it is a four footed creature, and a flying creature. It comes forth with the Sun groweth, flourisheth, languisheth, and dieth the same day with the Sun setting. In the time of the Summer Solstice, these diary creatures break forth out of certain husks of putrefied grapes, which husks (or such as seem to be so) whether they are a kinde of *Anrellia* proceeding from some kinde of canker-worms living in the water, it is not easie to shew; for in that particular the Philosopher is silent, from whom most of this story is gathered. *Pliny* calls them thin membranes; *Arist.* small bottles, and saith they are common to be seen in the River *Hippare*, by the *Commarion* of *Pontus*. They live a life both short and sweet, for they live not beyond the space of a natural

natural day, and in the evening they put an end as to their lives, so to their miseries. In the mean while they are sustained and kept alive with their own radical moisture, neither are beholding either to air or earth; hence we may gather the length of their life, yea rather admire and wish for it. These Insects *Cicero* speaks of in the first of his *Tusculan Questions*; these also, *Marshall* *Michodet* in his 2. Book de *Sarmatia Europaea* describes in these words, You may take notice (saith he) that in the Rivers of *Russia* and *Lithuania*, especially in *Boristhenes* and *Botany*, in the Summer there are a great company of the Flies called *Ephemeros* or Day Flies: they are Worms and Flies both; some have four, others six wings; in the morning they run upon their feet, over the waters about noon they fly about the banks, the sun setting, as many as were bred that day, dye in the self-same day. Which description doth much differ from *Aristotle* History of them, but because in the morning it is a creeping worm, then about noon a fly altogether, besides that he giveth to some six wings contrary to the mind of *Arist.* *Jul. Scaliger* in his learned *Exoteric Exercitation* against *Cardanus*, describes this Fly after this manner: I have observed a kinde of Fly frequenting *Saraca*, and the Lake of *Bennacus* called *Ephemeros* in the evening, but never any in the morning; being taken it lived only a night: it hath four very long wings, how many feet I know not; but if it have six (for I do not remember how many it hath) it sufficeth, it hath a head like a Fly, great eyes, the snout or beak rolled up together, the belly large, the tail exceeding long and full of joints, in the end forked, in some three forked, of colour a darkish yellow in the bigger sort, in the lesser of a brown or dunish, very specious. The *Tamiris* call this insect *Monilla*, as they would say *Monachella*. The *Adriatick* about *Meranum* and *Tergeste*, call it *Cuscutilla*, of my Countrey men it is called *Sistrion* i. e. *Sagittula*. *Alian* lib. 2. de *Animal.* sets forth another kinde of these Insects, such as are bred of sowre wine Lees, which when the vessel is opened come forth, and the same day, for nature hath given them a beginning of life, but in regard of the many miseries to which it is incident, quickly freeth them of it, before they can be sensible of their own, or any others unhappiness. But yet what these Flies of which *Alian* speaketh be, unless they be those that we call *Bibione*, I know not; for that our Vintners know of no other bred in their cask.

But *Scaliger* *Ephemeros*, I should rather have reckoned amongst the Flies called *ephemeros*, had not he himself referred it to this Class. I shall not think it much also to speak of *Pennius* his *Trimernus*, or a Fly living three daies, for the likeness of the one with the other, that so the numbers of the fudious may be filled with variety and rarity. It is of body very long, and somewhat like a Butterfly, the head little and yellowish, the eyes great, black, standing out of the head, the snout or beak winding in; of the colour of yellow mullens, with which it sucketh dew from the flowers; two black cornicles fastened a little above the eyes, the back and belly blewish, the end of the tail dunish; it hath only four legs, the hindmost whereof are yellowish, the edges of the foremost blackish; hath as many wings as feet, the outermost whereof are pale, want the utmost borders of them being of a dark yellow, the inermost of a brightish yellow. The outer wings when they are closed together for to cover the body, they are so contiguous, that you can hardly, yea very hardly perceive where they touch; it flies heavily, and continues, but a while in flight, within three daies it expires; it lives amongst Mallows and Nettles, this was found at *Petersborough* in *England* in the year 82. witnessed by very honest men and without exception. Thus *Pennius*.

In flowers, or rather the buds of the flower called white Bees, there is a kinde of Fly that eats the flowers, very small, I know not whether bred there, or coming thither from some other place. It seems they abide there for warmth sake and feeding. *Pennius* saith he was informed of this by his most learned friend Dr. *Brown*. I thought good to place the Fly *Bibio* in this number, because it is nourished by Wine, i. e. the clear juice of the grape (of which also it is bred). In the *Illyrian* Tongue called *Vitis robale*; by the Germans, *Winn Worme*; in the English, *Wine Fly*. *Cardanus* calls it *Musculio*; *Scaliger* not amiss, *Vulvella*, and *Vipulam*; for it flies into cellars of ten, cares for nothing but wine. If you take it and look upon it, you would think it had no snout or beak at all, and yet it is reported that they will strike through a Cask made of inch board, inasmuch that the wine sometime runneth all out. It may be *Grapsalus* meaneth these, when he writeth thus: The *Muscula*, *Muscula*, *Muscinus*. Flies bred in Autumn in the mother of Wine, and soiling the Wine-cups, do not live so long (and that deservedly) as to come upon the table in the winter. In the West Countrey in a Town called *Tanton* in the fruit of an Apple tree called *Velin*, in the Summer being rotten to the Cores, there is found a glistening fly of a green colour; which when the Apple is cut in twain, flies out and seemeth to be bred there of some kinde of worm that is in it.

The wounds made by any of these Flies, must be anointed with bitter Almonds bruised, or Remedies as Walnuts; when ulcers are made, it is fit to pour on liquid Pitch boyled with Hogs-grease. Those things that kill and drive away the Tyke-flies called *Ricini*, for the most part kill and drive away the Dog-flies, *Columella*.

The Fly also by his boldness and sauciness, hath taught men how to provide remedies against them; for whereas both at home and abroad, every where they were so troublesome, that nothing could be so safely kept by the Cook, but presently they would be at it and spoil in yea all kinde of meats whatsoever, they now use to strew or stick up in their houses, or boyl and mingle with such kinde of things as Flies love, *Nigella* seed, *Elder*, *Lawrel*, *Coriander*, *Hellebore*, *Bugloss*, *Borage*, *Sage*, *Beets*, *Loose-strife*, *Origanum*, *Basil* royal, *Herbane*, *Licbane*, *Balm*, *Alum*, *Strub*

straw having a flower like a Rose, Pepper, Ferula, Cockle, Libbards-bane; some give them Opium powdered with Milk or sweet Wine, and sprinkle it about. *Rhaphs* writeth that Crocodile Broth chased away Flies; who also commends the perfume of yellow Afsenick, with Olibanum, perfume of Vitriol, writing Ink tempered with water wherein Wormwood hath been washed, keeps the flies from the letters. *Plin.* The feed of Hentane, black Ellibore, and the Froth of Chickweed with Barley flower beaten and kneaded, and made into little morsels with Butter or Grease and smeared with a little honey, and so cast to the flies kill them. *Atius.* The gall of a Hart stamped with mill, or boyled in water, and sprinkled about the house will chase away all the flies. *Andrius.* Flies are destroyed with the smell of Wine distilled with the herb Balm. *Salut.* If you would gather flies together into one place, cast Rhododaphne well bruised into a ditch; the juice of the herb Ferula sprinkled worketh the same effect. *Atius.* Bury the tail of a Wolf in the house, and the flies will not come into it. *Rhaphs* *Avien* *Alberius.* Boor grease and Rosin melted, entangles them, Oyl chokes them, Verdigrise kills them outright. If you smother any thing with Casta beaten in oyl, it will be safe from flies. There is found in my Country (saith *Petrus Crisostimus*) a kinde of Toadfoot or Mushrome, broad and thick, reddish about the top, which sendeth forth certain knobs or little bunches, some broken, some whole; it is called the *Flies Mushrome*, because when it is made into a pulstet with milk, it destroyeth the flies. If a man hold in his hand the stone *Heracleus* or the touchstone, although he were dabbled all over with honey, yet will not the flies come at him, & by this means you may know whether the touchstone be true or no, *Atius.* They write that the King of *Cambyses* son was brought up by poison, who when he came to years, was all over so venomous, that flies at once sucking were wolen to death. *Stranger.* If the fly get into one eye you may shut the other hard and it helpeth. *Aphrodisius* in *Peribem.* If Camels chance to be stung by the *Tahani* or *Astus* (a kinde of Fly so called) as it often cometh to passe in *Arabia* smother them with Whales greace and all sorts of fish, and they will presently be gone. *Plin.* *Solon* in *Geoponics* biddeth to sprinkle cattel with the decoction of Bay-bories; and both these flies through a kinde of natural antipathy depart forthwith, If cattel be already stung with the *Astus* Fly smother them with Ceruse and water. The *Tahani* will die (saith *Pomponius*) when you set before them Oyl of the decoction of Iapd Crocodiles called *Scings* bruised with Hogs Teeth & the flour of foot. Moreover let cattel be led to pasture in the evening the flies guiding them, in the day time let them be kept in folds with boughs laid under them, that they may live the more easily and quietly. *Virgil.* Or else let them be brought to the sides of thick woods where they lie by reason of the dullness of their flight cannot fly so freely. Sundry kinde of remedies against flies. *Ruellius* upon *Hippocrates* as also *Apollonius* and *Brigius* have prescribed more remedies against flies. Now after what manner Flies do execute the Justice of God, let us briefly set down. No Age but will speak of that famous Army of Flies, with which that great Lord of Hosts of Heaven and earth did of old correct the fury of *Pharaoh*, and of the *Egyptians*, being joyntly made harden of heart; and yet the wicked Hypocrite did not come to himself, but wallowing still in the mire of sin without any shame, did afterwards invite greater and more grievous judgements to fall upon him! And that proud young gallants who would needs ride to heaven upon his winged steed, was dismounted and cast down by the Fly called *Oestrus*. *Hercules* also, although exceeding in strength, the Poets inform, that he was almost vanquished by flies. In the time of *Nero* *Brutus* when as corruption of manners, and guilt had infected *Britany*, there came down from heaven showers of blood; and those being dried away, did produce swarms of poisoned Flies, who if they did but once bite any man he presently died, as our Annals report. *Nicolas Albigus* saith an English man, being elected Pope in the year 1154. called by the name of *Hadrian* the fourth, was choaked with a Fly flying into his mouth. *Urspergensis.* Others say that he was killed with drinking a draught of water in which a fly was drowned: and that by the just judgement of God, who excommunicated *Frederick Cesar*, (whose surname was *Barbarossa*, or *Redbeard*), and did inspire all the Princes of Italy against him. *Nauclerus* out of *Johannes Cremenstis*. An ancient writer reports also, that the Army of *Julian* the *Apostate* was grievously infected with mighty swarms of flies; and *Grilius* saith that the *Megarenses* were by them driven from their habitation. In the year 1248. great numbers of flies dropping out of the air did cause in the Eastern Countreys incredible noisome and putrefaction; upon which followed such a Plague among the people, that scarce the tenth man among them was left alive. In the year 1091. wonderful store of strange flies did fly up and down many Countreys, who did sundry waies hurt the grass, trees, cattel, and men also. *Cranzins.* In the year 1143. a sort of fly about the bignesse of the common sort of flies, only of somewhat a longer body, did so fill the air, that for many miles together the Sun could not be seen, which were also very troublesome. *Urspergensis.* In the year 1285. *Charles* King of France leading an Army into Spain, and making war with *Peter* King of Aragon, an Army of huge flies of divers colours let upon the French, and slew them with their beaks, as it had been with swords. *Marinus Siculus* l. 11. de *Hisp. Reg.* In the year 1578. about the middle of August, upon the top of the Temple of *Brumbium*, there fell every year a swarm of flies which made such a noise with their wings as if they would throw down the roof. *Timothy Bright* told this to *Fennius*, a Physician, a man both learned and vacuous, and of no small note with us. Hither may be referred that which *Strabo* reports, lib. *Gorg.* 3. That amongst the *Romans* a Plague did often happen by reason of them, inasmuch that they were fain to hire men of purpose to catch them, who were payed according to the quantity more or lesse that they caught.

caught. But how greatly they annoy the inhabitants of *Africk*, *Apulia*, *Spain*, *Italy*, and the *West-Indies*, how grievously they sting and wound the *Carthaginians*, and the inhabitants of *Hispalia*, besides *Ovidius*, let those Englishmen speak who accompanied that flower of Knighthood, and Maul of the Spanish pride, *Francis Drake*. As for those things which *Apollonius*, *Fulgensius* and *Pliny* fabulously and superstitiously relate concerning Flies, I thought them unworthy of this place; and therefore those flies called *Pisatides*, *Cypriæ*, *Eliades*, *Alieæ*, and the rest of mere invention I pass by. It shall not be from the matter to tax in brief the madness of the ancient Gentiles, that we may thereby be taught to lift up our eyes to the true *Amplius*, the God that doth indeed keep flies away from us. It is said of *Heracles* in performing divine Worship, whereas he was almost killed by the Flies, that he offered sacrifice to *Jupiter*, called *Amplius*, or the Fly-way-driver, by which means they were presently dispatched into the River *Alpheus*, from whence he was afterwards called by the name of *Muscarius* or Fly-killer.

The *Eleans* did invoke *Myrmex* and *Myrmex*, that multitude of Flies might not cause a plague amongst them. *Pliny*. He relates also how the *Cyrenicks* were wont to worship *Achor* the god of Flies, that by his means they might be secured from being troubled with them. *Pliny* more truly might have read this name *Acaron*, or *Ishkron* in stead of *Achor*; if he had heard of the Town *Acaron* where *Bahai-zabub*, i. e. the god of Flies, that famous Idol used to be worshipped. *Urspergensis* saith that the Devil did very frequently appear in form of a Fly; whence it was that some of the Heathens called their familiar spirit *Musca* or Fly: perchance alluding to that of *Plautus*:

*Hic pol musca est, mi pater:  
Sive profanum sive publicum, nix claus illum habere potest:  
Quin asis ibi silico & rem omnem tenet.*

This man O my Father is a Fly, nothing can be concealed from him, be it secret or publick, he is presently there, and knows all the matter.

But away with those false and filthy gods which the Greeks therefore called *ἡμιθεοὶ*, because they did serve for bigbears perhaps for children, and ignorant and heathenish people, which we that are Christians, and profess the true Creator of all things, ought not at all to regard.

There is also said to be another use of flies. For *Plutarch* in his *Artaxerxes* relates that it was a law amongst a certain people, that whoever should be so bold as to laugh at and deride their Lawes and constitutions of state, was bound for twenty daies together in an open chest naked, all smeared with honey and milk, and so became a prey to the Flies and Bees, afterward when the daies were expired he was put into a womans habit, and thrown headlong down a mountain: which place of *Plutarch* (by the Translators leave) I think should be interpreted not *Ciphon* *cinthus*, but *antus Ciphis*, anointed with sweet smelling oylment. Of which kinde of punishment also *Suidas* makes mention in his *Epigramis*. There was likewise for greater offenders a punishment of *Boats*, so called. For that he that was convict of high Treason, was clapt between two Boats with his head hands, and feet hanging out: for his drink he had milk and honey poured down his throat with which also his head and hands were sprinkled, then being set against the Sun, he drew to him abundance of stinging flies, and within being full of their worms, he perished by little and little, and so died. Which kinde of examples of severity as the Ancients shewed to the guilty and criminal offenders; so on the other side the Spaniards in the *Indies*, use to drive numbers of the Innocents out of their houses, as the custom is among them, naked all bedaubed with honey, and expose them in open air to the biting of most cruel flies. But for these things let *Nemesis* answer; who is at the back of cruel miscreants; yea may be said every moment to be present with them.

To conclude; the last use of Flies (and that not to be contemned neither) appears to be this, that whereas none of them passe a Summer, yet some of them do not live out a short day, we should by them be put in minde of our own frailty, and of the uncertainty of this vanishing life; the which although preserved with all the dainty food that can be got, with the softest raiment, and all the best waies and means that may be for a short space, yet when it seems most to flourish it on a sudden declines and scarce with the fly holds out an Autumn, much lesse a Winter; we are in *Pindars* account but *ἡμῶν*, *Daiermen*, i. e. of a daies continuance, and as the dream of a shadow. And with the flies (short liv'd, yet shorter liv'd then they, for the most short lived of them liveth a day, whereas we have younger children that survive not sometimes the fourth part of an hour. Away then thou Tyrant whoever thou art, make lawes as thou pleasest, persecute the godly, add impudence to thy strength, trouble and confound all things, give thy self up to all abominable and filthy lusts; yet at length *Jupiter* shall scare away these flies, and after thou art dead, exercise thee with variety of torments.

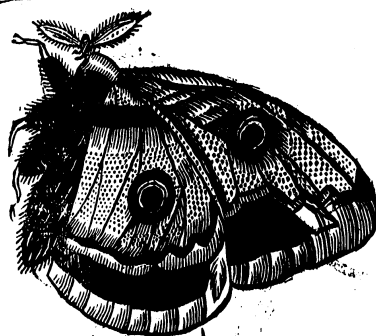












The third hath a great body rough and blackish; each wing hath one eye, the light or apple whereof is black, the roundie brown, the half circle white. There are divers pieces in the wings of a watry Amethyst colour, the edges of the wings at the first sight appear ash-colour, afterwards Eagle-colour. The head very short and little, putteth forth on either side a black eye, the apple whereof is of a notable whiteness, between those break forth two very small short horns of a dunnish colour. It is begotten of a rough Canker-worm, not a smooth.



The fourth hath a great dark coloured head, out of which arise two freight cornicles somewhat black, the neck is adorned with vermilion specks, the breast rough, square, dusky, the shoulders coal black, the belly of Amethyst or purple colour, divided with five or six circles or rounds; the feet black as pitch, the wings of a light brown, full of long black little veins.



The fifth hath a white head, black eyes, the horns a little yellow, the outmost wings long of a sad colour between white and brown, the innermost being lightly and as it were by the by coloured reddish, the shoulders very black, the rest of the body somewhat of a rose colour, bound about with seven black circles, a white line running all along the middle of the belly.



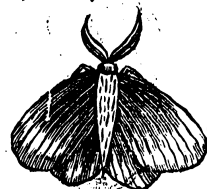
The sixth hath head and shoulders rough, and the utmost wings drawn with blood colour lines, are a white brown; the eyes of the head standing out, of a violet or azure colour; the inner wings somewhat of a carnation, represent the eye in the middle part, shining with the apple crow black, the circle about it purple; the body like dried flesh, and a little smoak't, divided with six roundies black and brown;



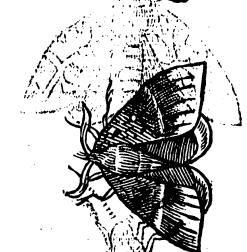
The seventh hath the outer wings white, with certain brown spots here and there as if it were watered Chamberl; the neck ring'd about as it were with a red skin reaching all down the shoulders like a Fryers cowl; the head is red, the eyes pearl colour, the horns flame colour; the innermost wings of a shining red speckled black; the feet red, the belly all of the same colour, with seven incisions or cliffs of a deep red lead colour.



The eighth is almost all over brown, but the edges of the wings and the middle part of the horns are of yellow or box colour.



The ninth is almost like unto it; but that the edges of the wings are like black sand, it hath horns broad and bended, of a whity-brown colour, the middle of the outermost wings stopped with a round white spot.



The tenth is of a like bignesse, all over of a white brown, but that the middle of the outermost wings is marked with a white spot, and the eye with a very black apple.



The head of the eleventh is tuberos, the horns slender, the body like clay trodden; otherwise the wings are all of a dark silver colour.



The twelfth somewhat of an ash-colour, the wings spotted black, the eyes black, the apple white.





The thirteenth hath very little or no horns at all, the body all over yellow, except the eyes (which are little and black) and the wings which are whitish.



The fourteenth appears of colour various, it hath black tuberos horns; as also the eyes and feet; the shoulders are drest with five white plumes as it were, of which the two middlemost have three black specks; the wings snow white, bespeckled here and there with black, yellow and blew specks; the body rustier, articulate or jointed, the sides whitish, she puts her tail in or out as she pleaseth it is sharp, yellowish, jointed; all the body as it were sprinkled with dust; otherwise in regard of the tuberos cornicles it had come in the number of the day Butterflies. It layeth abundance of yellowish eggs, in the laying whereof she puts forth a little tail, which she pulls in again at pleasure.



The fifteenth hath two black slender cornicles, the head and shoulders hairy, of a dun colour, the neck adorned with a collar of Vermilion, the shanks reddish; the outermost wings chamoleted with white and dun, the innermost are exactly red spotted with black spots; the body of a light vermillion, rounded about with six black guards, or welts,



The sixteenth seems to be very rare: if you look upon it as it lies on its back, it seems to be all over of a murrey colour; if as it lies, green and yellow; it hath five very red lines or streaks drawn along the shoulders; as also seven spots set quite through the middle of the back, do adorn the rest of the body: the wings all over versed with murrey spots or shadows rather the beginning whereof from the head to the bottom of the breast is terminated with a line of whitish or silver colour.



The seventeenth, when it goes upon its feet and its wings close to its body, looketh dun; but when it stretcheth with the wings forth, the innermost wings are carnation set about the edges, with a blackish line or border: it hath very long cornicles, and the promiscuous or snout doubled in or rolled up together: the gray shoulders are marked with round sand colour spots; the side also, and all the joints of the body are set and edged about with hoary hairs.



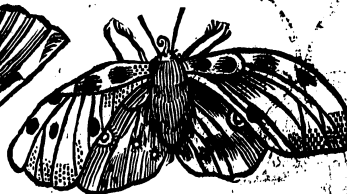
The eighteenth, being very rare indeed, was sent me by *Clusius*. The horns whereof pike colour, the head black as pitch, the nose crooked, the circle of the eye white, the neck scarlet or crimson; the shoulders being rough of hairy, are covered as it were with a fable mantle; the outer wings decked with a white and black hem; the innermost red speckled here and there with black spots; the body black, as likewise the feet; but the sides of the body are set out on each side with seven bloud-colour spots.



Like unto this there was another sent, but with the cornicles altogether crow colour; and on the middle of the shoulders dressed with a pure white list as it were with a string of pearl.

Of all these the bodies seem to be of a great bignesse.

Now we shall address our discourse to the middle sort of *Phalene*.



The first of which is white all over, but only that the outer wings are bedawbed with certain black spots & freckles; and the innermost with very red specks and pimples white in the midst, the eyes very black, the feet and horns yellowish; instead of a nose there comes forth a rough

hair or bristle, the which is wound round up together like a roll.



The second, the whole body rough or hairy, and of a light red; and so are the outer wings, were it not for whitish spots, and hems that go about, and yellow little eyes in them; the cornicles being yellow, are marked with black spots; the inner wings are of the colour of the marygold, but adorned with eyes and hems like the former.





The third hath four white wings; the outer wings overcast with little blew veins here and there plentifully, and two round blackish spots in the middle; the line that is about the wings is yellow, and the cornicles of the same; the head and body black, the eyes exceeding white; the sides of the shoulders are marked with four very white oblique lines on each side.



The fourth hath broad horns of crane colour, the body black, the sides gray, the wings yellowish, all over besprinkled with black spots like dragons, broad at the top, and afterwards round; the edge of the wings like the Bars snagged, and as it were prickly, all over black, within fix white specks; pearls being placed on each side do set it out.



The fifth is all over black, but that it hath pale reddish spots upon the wings.



The sixth hath the body and the cornicles black, the eyes white; the wings are black underneath, above fringed with golden hair & spots; to which are joyned three blades, run through with silver colour & chequered: the outmost wings have a black border winding in and out, with gold laid underneath, and as it were wrought in and out with a needle.



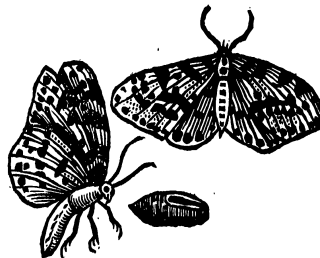
The seventh broad horned, the black body waxing hoary; I know not whether I may count it for a different or a race to it. The beginning of the wings are red, the rest yellowish, but each part embossed with black square spots and a golden thread running along the edges.



The eighth hath four cornicles spreading wide, of ash-colour, two of them very long and larger in the borders; the body like the former, the wings of a pale ash-colour, chequered with black and painted every where about the edges with drops of the same colour.



The ninth, the head, eyes, cornicles, body, and innermost wings do represent the golden ore; the shoulders and outmost wings are black, but only for a black border, having on each side of it an ash-colour line.



The tenth hath its body yellow, bedropt with black from the neck to the tail, both back and sides; the eyes, cornicles, and feet perfect black, the outmost wings white, but garnisht with borders of yellow, black small studs, and spots likewise.



The eleventh if you look on the wings; it is snow or milk white, but only that it is all bespeckled with little black spots; the shoulders also are white and downy; the body and back yellow, and joyned, having eight little black spots; the eyes big and standing out of the head, between which sprout out two black and hairy cornicles. In the night time she flies about the meadows and pastures.

The twelfth hath its wings so long that it can scarce fly; it hath very short cornicles, little very black small eyes, all the body else is white, being here and there sprinkled with certain yellow veins and hairs.



The thirteenth (except its black eyes) is of a Crane-colour, somewhat blackish; the cornicles more than ordinary long, the body rough and hairy, the wings of the same colour with the body, but about the edges glistering with a greenish, glassie varnish.



The fourteenth is a very rare one, though all over almost of a sand-colour; it hath cornicles for the bignesse of the body, strong, black, and crooked like the ox, the eyes great and black, the head short, the neck thick; the outmost wings adorned with certain black studs; the ridge of the back is drest up as it were with five black heads of Gilliflowers, three forked.



The fifteenth hath its wings of a pale ash-colour all over, amongst all the rest it is destitute of cornicles, the eyes are somewhat black; the back yellowish and set with five dusky coloured spots.



The sixteenth seemeth to be of the same colour, but that it is streaked with black athwart the outermost wings: but this is every where of one colour (except the eyes which are black). It hath a long body, joyned, four long narrow wings, six feet, those behinde are twice as long as those before, it hath slender cornicles but growing out very far.

17. This comes of the Caterpillar of a Silk-worm, white all over but the eyes, which are blackish, and certain small yellowish veins running straight over the wings, and crosse the joynts of the body: I call it the Silk-worm *Phalena*. Of which more in the story of the Silk-worms.

The least sort of *Phalena*.



1. In the Classis of the least sort of all, we shall place one and the first very admirable, going on four very black feet; it hath the outer wings azure, the innermost yellow, and the innermost (which is not usual) less than the outermost; the yellow body also is so big, that the wings can scarce cover it; the cornicles are full of little points, and the eyes all but the sight blackish; the head and the snout (being long, slender, and rolled up together) are somewhat yellow.

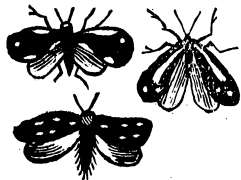


2. The second appears blue and green, it hath a little body, the feet and cornicles blackish.



3. The third hath the shoulders and wings greenish, of the colour of leek blades; the body dunish; the outmost wings are guarded with a guard let with white and dun spots; it hath a very little head, the feet and the cornicles ash-colour.

Moreover there are found in houses a certain sort of little silver coloured *Phalena*, marked with black spots, which fly to the candles, called *Moths* in English, which eat linnen and woollen clothes, and lay eggs, of which come *Moths*, and of the *Moths* again these *Phalena*; they are said to come first of all from rose leaves and other herbs putrefying.

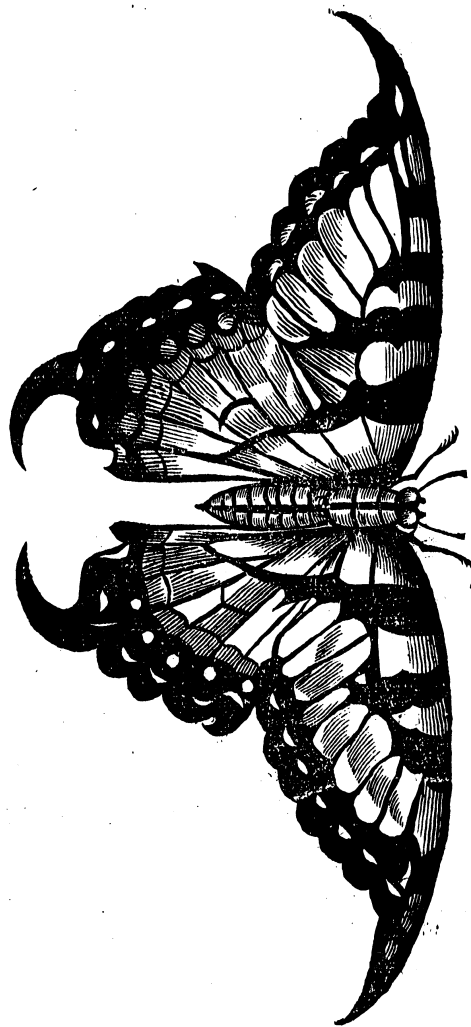


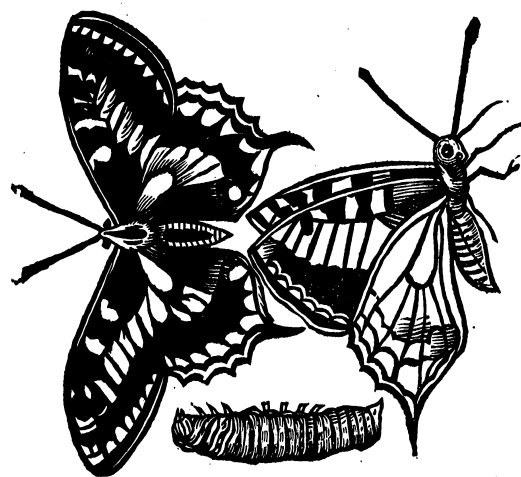
Three others I have observed in pastures and meadows. The first whereof hath the outer wings black, each of them marked with 5 red spots like blood; the innermost wings are all over red, the body dun; the head, short cornicles, and the feet blackish. The second is all alike, only that it hath but four red spots in the outmost wings, and hath a more slender body. The third is almost of the like shape too, but the cornicles are a great deal longer, and the red spots scarce.

tered after another manner; for there appear about the edges of the wings only two red blood-like spots; but from the rising of the wings two spots drawn at length. And thus much may suffice to be spoken of the night Butterflies, or *Phalena*; passe we on now to the day Butterflies.

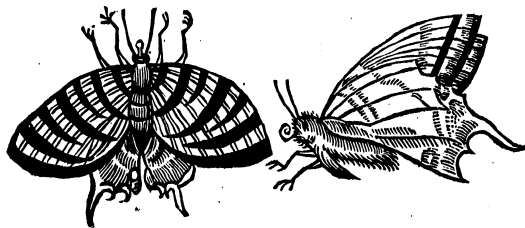
The Day Butterflies are to be described after such a sort, that all men may see the fruitfulness and elegance of Nature in this behalf and admire. For she hath not less played her parts, or wrought hard rather in the variety of these, their colours, attire, rich apparel, roundles, knots, studs, borders, squares, fringes, decking, painting, making them, then she had done in the *Phalena*.

1. The first Day-Butterfly being the greatest of all, for the most part all yellowish, those places and parts excepted which are here blacked with inke. Moreover, the roundles of the inner wings are sky-colour, inasmuch that you would think they were set with Saphire stones; the eyes are like the *Chrysolite*: the bignesse and form is so exactly set forth in the figure, that there needs no more to be said of it.

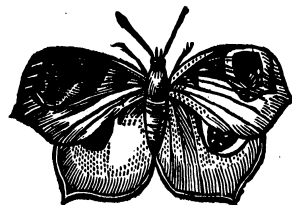




2. The second differs very little from the first but in bignesse; it hath nevertheless, very black eyes & longer cornicles, where you see the color white, there suppose it yellow, except it be those great eyes at the end of the innermost wings, the apple whereof must be made flame-colour, but the semicircle blond-red.



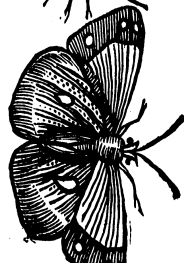
3. The third not much unlike in colour, but that the extuberances, and the outmost border of the innermost wings is sky or wood-colour; as also those three taches which you see painted under the hollow part of them.



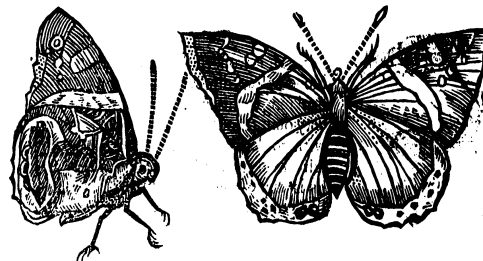
4. The fourth may be said to be the Queen or chief of all, for in the uttermost part of the wings, as it were four Adamants glittering in a beazil of Hyacinth, do shew wonderful rich, yea almost dazzle the Hyacinth and Adamant themselves; for they shine curiously like stars, and do cast about them sparks of the colour of the Rain-bow; by these marks it is so known, that it would be needless to describe the rest of the body though painted with variety of colours.



5. The head, feet, cornicles are of blond-red, but the eyes purple, the back black and blue, the belly yellowish, the wings at the base of a bright yellow, and afterwards more sad; the utermolt parts of them being rusty colour, and waxing blackish with an unpleasing duskiness, are beautified with three little yellow spots; to the innermost being sprinkled with rusty colour, first two yellow, afterwards three pale yellow spots do flick. If you consider them with the face upwars, the upper wings are of a greenish yellow, marked with six or eight spots, the innermost of a light grass-green, stained with two white spots; the belly and face yellowish; it comes out of a whitish *Aurelia*, spotted with little dark coloured spots.



6. The upper wings without are blackish, with a certain gard of a decayed red running through the midit; the extremities of them glitter with white spots and specks like drops, being sharpened with dark coloured notches round about; but in the inside that guard doth shew of a more clear and full colour, and toward the bottome they seem blue; the undermost wings appear of one colour without, of another within, without they are all over sad coloured, except a reddish border, with a prickly purple very small and blackish, marked with four little points, and two diverse coloured opals placed together; within they



they shew nothing like to this, but from a black and purple embroidery, they end in a sad fading red, the body is black, the eyes horns, feet, all dusky and of the same colour.

7. The whole body is black yet in every incision of the back, it hath two white spots; & wings between yellow and red, adorned

with black and very white specks: but the bountifull Mother of all things, Dame Nature, hath chiefly beautified the borders of the wings, which have little teeth (ser like to fangs at an equal distance one from the other, in the border whereof 20 blue fangs pierced through with black lines, make a glorious shew.



8. Nature bred this with a chamblet mingled coloured coat, but it wants lively colours, for the wings are of a black reddish fading yellow and russet colours, and it is more beautiful for its soft skin, than for its gallant apparel.



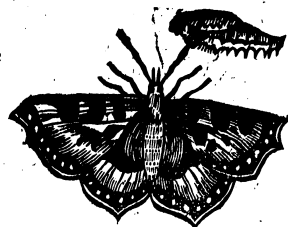
9. This is for the most part of an ash-colour, but if you look on the inside of the innermost wings, there is nothing that can better represent the wings of a Turkey-cock; for the feathers that he flies withall, are covered by other feathers with scales; the eyes are black, as the horns are also, which are swolen like water-cats tails.



10. The body is black, the shoulders are covered with yellow down, as is also the whole head; the horns are yellow also toward the head, which appears the sadder by a spot of a dark red; many round pearls let at just distances, do make the outwardly rounded skirt of all the wings to be more graceful: but within side they are spied with very black lines like lintels. But as the part is less comely outwardly, so the inward part of the innermost wings, shining with a whitish green, doth set off spots upon it, shines gallantly; and these spots are round, and outwardly round pearls, seem inwardly pure pointed



11. It holds close the list of original years, being in blue, the upper wings being of a flaming yellow, like like fire painted with six most black guards, the root of the wings is black, then they shine rusty yellow to a fiery colour; the body is downy with darkish hairs, and the horns and feet are of the same colour.



12. It is wonderful beautiful, the wings are light bloud-colour, dipt with black spots, they shine with smal long beams disperdely drawn like threads to the very outmost of the coat, and this is adorned within with golden crooked lines like the Moon, being it self a murry, nicked on the sides like a Saw: the body is purple coloured from black, the eyes shine like gold, the feet and horns are black.



13. The body and wings appear black, upon the black wings, jagged in the circumference, not hairs grow, then borders, and lastly golden fluds: also the small eyes in the black head are tintured with gold, but the horns grow forth with spots white and black, and end with a small very black knob.



14. It much delighteth in the curiosity of the decking of it; the body is rough and blackish from white, a black eye, and a white pupilla, about the bald eye you shall see a circle almost white as snows, the horns are the same with the former, the outward face of the greater wing is known by the flaming colour, golden lines being drawn upon it, with four dinted skirts; about the end of it three round pence for triangular, do adorn it. But the inward face of it seems most pleasant, with divers golden scales and fluds put like a coat of male, and ryles of a house: also a golden line beautifies the utmost part of the wings. It represents a Peacock very much by its Wings, and as that is, so hath it a proud and gallant body; the feet and legs are somewhat black, (left it should be proud of its feature) the snout is like a spiral line made up like a Maze.



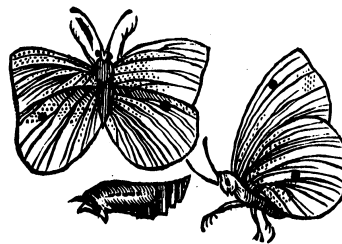
15. This hath also a hairy beak wreathed up like a vine tendrel, it is inwardly ash-coloured, and outwardly a faint gray, the wings are prickly, jagged like bats wings, some dun lines do outwardly part these, inwardly six black fluds do much set them forth.



The outward wings of all are a dark green in light, which some spots and pieces of white and yellow do beautify; the inward are perfectly red, being sprinkled with ten most black spots: the belly shines with eight yellow scales; the back is red inclining to yellow, and the tip of the tail is a light blue. The rough shoulders are commended by a yellow Moon drawn downwards, a white silver coloured apple makes the red eyes more sharp.



1. The eyes seem yellowish, the The middle horns a decayed russet, the wings and fore of Day: all the rest of the body are a pale Butterflies: yellow; the inward wings are marked outwardly with one only full yellow spot, but inwardly they are tintured with a certain black spot upon a watry green; the back is blackish from a blew, the belly is yellowish, it proceeds from an *Arrelia* coloured with gold.



2. The second is not so pleasing a colour, the inward wings from a fading blew, decline to a Crane colour, and end as it were into a lead-colour, the outward wings are blacker, noted here and there with dark spots, and the body seems to be the same, it flies rudely with dented wings, and retched in the borders, and as it were prickly, and like a mourner of that kinde, it never comes forth but in mourning apprell.



3. We have painted out this, as it were stiffe and raising it self with the wings lifted up, it hath also prickly dents, but the outward wing from a pale yellow is marked with the black pieces; but the next part of the inward wing from the root is dark black, the middle part is pale, the last part is whitish, chequered with right and thwart fibres; the body appears dusky, the eye is black as pitch, the horns are black.



4. This is distinguished two waies; for when she opens either wing to ballance her body, the body shewes black, and four dark wings fastned to it ridged as it were with a black pencil, and ending in a shining rusty colour; but when it sits on flowers and lifts up the wings, the first wing is yellowish, adorned with a comely round spot like a target, the colour whereof is pale, the boes of it black, the outward circle citron coloured; the belly, and breast, and the whole face are white; the black horns incline toward a yellow.



5. It seems inside and outside all alike; the head and wings look pale; the body is wan, as also the horns; the eyes are flaming red, the shoulders are hairy with a pale down.



When it stretcheth its wings towards you, it appears a shining fandy colour, like herb dragon, with black spots: the body also if you see the backs seems a watry black, the belly somewhat more dark; they eye is black, clear with a white or whitish apple; the horns are black as a crow, the wings from you are of an unpleasant brown, and of a decayed Weefil-colour.



7. The jagged wings represent a fire-stone, shining with bristle coloured little veins; and the skirt also being sprinkled with black spots; the whole body is of a shining black spots; the points divide the horns, and in the black forehead golden eyes twinkle after a sort.



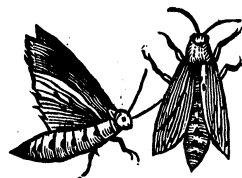
8. This hath the same kind of body, but the horns are reddish from yellow, the wings appear changeable, marked with divers pleats, ridges, borders, skirts, of many colours: all these colours are hid and dull to the eye, they want all clearness and varnish, and are pleasant only in their mixture, placing, and number; in some places they represent a smoky flame, elsewhere an unpleasing dark colour, and a fading red; and the rubies included in the last border in white semicircles are nothing lively.



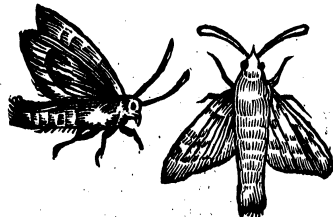
9. The outward wings are spotted with dirty muddy spots, about the last part they are adorned with a black target, the middle whereof is set forth with an ivory point: the inward wings have four such targets, but augmented with a yellow circle besides; the two middlemost are of a fit magnitude, the two outmost are very small; the body of this creature is a whitish dark, the eyes that stick out are black: but if you look upon the inward part of the inmost wing, they look smoky, and they are very beautiful, with six gilded leaves curiously disposed.



10. The head is a pure white, but some dusky and black spots adorn the milky wings, the back and sides are red from yellow, 9 or 10 black spots put under the cuts do adorn them.



11. In proportion, and almost in colour and form of the body it represents the Eagle amongst birds of prey. It hath narrower wings than other Butterflies, it hath a broad feathery tail, the inward wings are not watery coloured, like the rest of the body, but red from yellow, of a flame colour; it hath a crooked nose like the Eagle, a belly hoary, the horns are great and strong, of the same colour with the uppermost wings; the eyes are pretty well prominent, black, with a pupil white as snow.



12. This hath the same form, it only differs in colour. The body is ash-colour, the tail is black, and the back is something silver coloured; the wings are long and blackish, and pollured with little black spots, the inward wings appear dusky dark coloured; both these kinds of Butterflies are wonderful Swift, and dare for flight to contend with the Eagle.

13. This



13. This is the swiftest of all, and hath shoulders seeming of a yellow moss colour; the wings are white as milk, in the extremities of them they are marked with five or six dusky feathers, the middle of the yellowish back is adorned with a sole black spot, of both sides two downy extruberances are thrust forth, the rump is compassed about with a certain black down, it will fly as fast as any Swallow, and indeed is swifter than any Bird.

We have seen but eight of the smaller kind.



1. The first parts of the inner wings are of a full bright shining scarlet colour, and delicate red, but the outward wings represent a light purple, mingled of black and red, and drawn over with some snow white spots, the rest of the body is black, even the branched horns also.



2. This is silver colour at the roots of the wings, which afterwards are purple coloured from blue; the uppermost wings are graced inwardly with two black white studs; the body is full of dusky spots; it hath six purple feet, three put forth on each side; it hath a crooked bill; out of the head four small horns break forth, besides the two long ones.



3. If you should see this fly; you would say that the wings are of a decayed purple colour passing to a lively blue, and all plighted severally, but inwardly there are round eyes, they seem fibre gray and cankered; the head is blue from green, the body is deckt with dusky and white laces; the eyes seem very black, and the apples of them very white.



4. It comes in a pleasant habit, with wings set with eyes, that are of a most heavenly incomparable blew. The most perfect artifice Nature it self made it all eyes; that you would say directly, that *Argus* eyes were not set into the Peacocks tail, but into the wings of this Butterfly, which the doth stretch out against the Sun with no lesse pride than the Peacock doth, and (by the heavenly colour which she excels in) she is almost able to shame the Peacock.



5. The body is of a Crane colour, the upper wings are green in a white stalk; in the middle they are yellow and ash-colour, the interior wings are at the root of a dark green, otherwise whole, but inwardly they are sprinkled often with spots of an unpleasing green; the eyes are black, as are the heads of their horns.



6. It hath round bunched smooth shoulders, which are of the colour of ashes mingled with ink, the body is full of cuts, and is of an ash kind of colour; it hath narrow wings, and the utmost are of a Crane colour shining with some exceeding bloud red drops, the little head, the feet, the horns are like the body in colour.

7. You

8. You





7. You would say, that this is kin to that is bred of *Ginny pepper*, and setting aside that it is lesse and more black in body, and the silver colour of his upper wings, it hardly differs from that.



8. All the wings are faint clay colour, or rather shining with a pale yellow, with some brown spots, and others that represent old cankered colours, the little eyes are black as a raven, otherwise it is all yellow.



9. All the wings are painted with white and gray like sea shell-fish, the borders are rounded, and deckt with white lines running through the middle with indentures.



10. This hath wings like Periwinkle shells, set with studs, it is mingled colour of a white and obscured, and doth set forth to us the unspeakable power of God in the diversity of its colours.

Of the use of Butterflies.

He that beholds the forms, clothing, elegance, and rich habits of the Butterflies, how can he choose but admire the bountiful God, who is the Author and giver of so rich creature? wherefore art thou proud in decking thy self, and takest so much delight in thy own beauty? possesse thy temporary fading goods without envie, for know that there is no Butterfly but is as beautiful and pleasing, and for the length of their life they have a more constant comeliness than thou hast: thou hast it may be an incredible agility of body, and numbness in runnings, but yet O man if thou shouldst exceed all men, thou canst not equal a Butterfly. But you will reply that your clothing is incomparable, and that you can boast of the *Perfian* and *Tyrian* silks, of the best purple dyes, brought unto you by shipping: truly should you but see the rich robes of any Butterfly, besides their purple dyes, and the rows of pearls, and the borders set with diamonds, rubies, the pyropus, opals, emrods; if you did but see and consider seriously the elaborate composition of their fures and joynts and the imbroidered work here and there, of fine divers coloured twine silk set with studs and eyes of gold and silver, thou wouldst let fall thy painted tail like the Peacock, and casting thy eyes down to the ground from whence thou wert made, thou wouldst learn to be more wise. It may be thou wert born at first in a house of clay and mud walls, or else in a palace built of polished stones; but some Butterflies are born in their houses that are the *Aurelia* like to pure gold, and exceed *Atalus* for the excellency of their birth, and delicacy of their apparel. Learn therefore O mortal Man, who ever thou art, that God that is best and greatest of all, made the butterfly to pull down thy pride, and by the shortness of their life (which is of no great continuance) be thou mindful of thy own failing condition. Wert thou as strong as *Milo* or *Hercules* and wert fenced or guarded about with an host of Giants for force and valour; remember that such an Army was put to the worst by an army of Butterflies flying in Troops in the air, in the year 1104, and they hid the light of the Sun like a cloud. *Licofthenes* relates, that on the third day of *August*, 1543, that no head was left by reason of their multitudes, and they had devoured all the sweet dew and natural moisture, and they had burn'd up the very grass that was consumed with their dry dung. Also in the year 1553, as *Steidmann* reports, a little before the death of *Maurice*

the Duke of *Saxony*, an infinite Army of Butterflies flew through great part of *Germany*, and did infect the grass, herbs, trees, houses and garments of men with bloody drops, as though it had rained blood. But it may be thou art in love with some female beauty, and desist to please her; O fool, remember the fate of the *Phalena* Butterfly, which being invited by the light of the candle, as by a fair beauty, is consumed by the flame it fell in love withall: and rejoicing like the *Pyrausta* bred in the fire, removing but a little from it is presently dead. And thou great *Altrologer*, who makest *Aries* to be the forerunner of the Spring, rather adore the Butterfly that is a certain messenger of the Spring, and a more sure prophet than your horned Ram. Would you allure fish to your hooks and catch them? hear what gallant baits are made, as we finde it in the *Tartarine Geopon*. Take 1 ounce of the venomous dung of Butterflies, Anniseed, Goats-milk theese, Hogs blood, Galbanum, of each half an ounce, *Opopanax* 2 drams, beat them all diligently, and powring on good sharp Wine, make Troches; dry them in the Sun and keep them for your use. Catfish, and almost all birds of prey are freed from consumptions by feeding on Butterflies, and grow very fat thereby. *Nicolaus* in a composition of some powder, makes mention of burnt Butterflies; by which words *Turnebus* understands Butterflies that fly to the candles: they cause urine exceedingly, as almost all Insects do, but with less danger: moreover, since they feed on dew alone, as do snails, and abhor to meddle with sharp corroding or stinking things, or such as have any venomous or malignant quality in them; truly the Colledge of Physicians are too wayward that dare prescribe a Spanish fly inwardly, yet never made an essay to know what force there is in Butterflies. *Plinius* saith wisely; That our greatest knowledge is very small compared to that we are ignorant of: for some small creatures upon the earth are despised, whose force, if we did know it, we should praise to the skies. You therefore sons of *Aesculapius*, search out the virtues of Butterflies to be used inwardly and outwardly, for the health of the body; for had Butterflies been useless, surely God would never have set them forth, bestowing so great liberality upon them. But since they are not only for a remedy for us, but may do us much hurt, being inwardly taken in too great a quantity, as being poyson; I shall shew how that may be prevented, and driven off, if *Aridanus* deceive me not. *Phalena* or night Butterflies, such as fly at candles at night, it may be were accounted of ancient time amongst dangerous medicaments, for the same reason that Toads, Bats, Owls, Howlers and Gnats were; for they held that all living creatures that labour in the day were safe to be used; but night-workers most unhappy and accursed. *Pliny* commands a Goats liver to drive them away, yet he shews not the means to use it. But if night Mothes go into a Bee-hive and trouble Bees in the night, bury dung mingled with the marrow of an Ox, and by the smell thereof these unquiet disturbers will presently fall down. *Colmella*, *Palladius*, in *April*, (for then they commonly do most hurt) places a brais vessel between the laves, that is high and narrow, and puts a lighted candle in the bottom of it, and they will come inhere for love of the light, and there they are half burnt, or choaked by the smok in the narrow vessel. Bitter vetches are held amongst edible herbs, to prevail most against Butterflies; others drive them away with smok of With and Hemlock, as *Rhaphis*: others hang a horie tail pulled off, upon the door; and they wittily believe that Mothes are kept away thereby. Thus much I had to say of the divers use of Butterflies; who though some despise them, yet are they of great use and admirable.

## CHAP. XV.

### Of the Glow-worm.

The Greeks have many names for this Insect, for from the shining of the shanks and tail, it is called *λαμπρίς*, *πυραυλίσ*, *ενοχλαμπί*. *Suidas* calleth it *πυραυλίσ*; *Aristotle* *βροχμίσ*; *Hesiodus*, *πυραυλίσ*: it is also by way of metaphor perhaps called from the Larine word *Scintilla*, a spark, *λαμπρίς*, & *αμπί*. The same Author calleth the male of it *αβύς*, because it is *καταβύς*; but the female cannot be so called: some improperly call it *φάλανα*, for it is one thing to covet the light, another to carry light with it. Those which *Aristophanes* calls *μυλίας*, some interpret *Cicindelas* or Glow-worms, but upon what ground let them judge.

The Latines call it *Cicindela*, *Nocticula*, *Nitidula*, *Lucio*, *Lucula*, *Luciola*, *Flamis Vennis*, *Lucinaria*, *Lucendula*, as appears out of *Cicero*, *Pliny*, *Scopas*, *Agricola*, *Varrus*, *Festus*, *Plautus*, *Scaliger*, *Turnebus*, *Albertus*, and *Silvaticus*. In Arabick they are called *Allachatichi*, that is to say, birds flying by night: in French *Ver luisant*, *Mouch claire*; of the Germans some call it *Zindnerle*, others *Liegh mugh*, i.e. a shining fly, and *Zindwormle*, speaking of the male. For in some places of Germany the male Glow-worm, that is that which flies, doth not shine at all, but only the female called *Gras-wurm*, *Gagle*, and *Furceder*. About *Francesfurt* on the *Main*, from the time in which they do most frequently appear they are called St. *Johannis Kaefer*, and St. *Johannis Fliegen*. In Brabant *Ein light oft nachts mugge*. In Italian *Luciola*, *Lucio*, *Farfalla*, although they grant this to be the name of other sorts of flies that come about the candles. In *Vincenza*, *Bisfola* (*hogla*), i.e. a fiery worm: in Cremona, *Lucivola*; Lombardy, *Luiferola*; in Spain, *Lariergana* and *Lutierga*; Polonia, *Zkucnik*; *Chazarzik*; Hungary, *Szwieracy*; in Hungary, *Eyel twaduckle*, *bokaratky*.

*volans*. In English, *Glow-worm*; *Shine-worm*; *Glass-worm*; i. e. a glistening or shining worm. For here, as also in *Galicinia*, the male of flying *Glow-worm* shines not, but the females which are meer worms. On the other side in *Italy*, and in the County of *Heidelberg*, the females shine not at all, and the males do. I leave the reason to be discussed by Philosophers.

Their description.

Now the male *Glow-worm* has wings, the female are without, and that is in *Europe* it self. The male *Glow-worm* of *Europe*, is a little creature flying, having four wings, the outermost whereof are like leather, the innermost membranous, of a silver colour, transparent: The body is long, a little squat and flat, having five incisions or clefts: whereby it may be extended or contracted as occasion serves; the body at length seems to be longer than the wings, when contracted; shorter, the head broad, dunnish, flat like a hood; out of the forehead come two cornicles as out of one centre, near which the forehead of the head doth a little exuberate: not far off from the roots of the cornicles on each side rise little round swellings, shining like jet, which are in stead of eyes, the head joined to a very short neck and body of a blackish dun colour, it hath six feet in the



breast near unto the head, the hinder of which together with the shanks are of a yellowish colour, the rest of the feet blackish, it is slow, and creeps as it were with a grave pace; the breast buncheth forth a little the body, between the incisions or clefts whitish, at the tail it hath two spots, on each side one like a Moon, in clearing out of which cometh that shining brightness in the night, like burning brimstone, as if it did sparkle in the air: this never is seen in *England*, or if it do live here, it shines not at all.

The female *Glow-worm* is a slow paced creature without wings, the breadth of two fingers in length (although in *Galicinia* *Joseph Scaliger* saw far greater and longer, those which they call *Lutaria*) of the bigness of the mean *Canker-worm*, to which it is not much unlike: the head small, flat, hard, black, long, and sharp toward the mouth; out of the end of which come forth two short black cornicles; it hath six feet, small, black, with three joints, near the head like the *Canker-worm*; the body long, somewhat thick, and flat like a fillet, having twelve deep incisions besides the neck which it puts out or in as it pleases, the parts between are like black plates heaved up when they go. All along the back there goes a very small whitish stroke from the head to the tail: the sides of the belly are of a bright murky colour, the belly and tail toward the end whitish, but the rump it self is black, by the benefit of which she lifts up her self and creeps, and by certain little forks that come out of the same, she hangs upon any thing; under this part the voideth from her belly a clammy and flaky excrement like honey, which being brought back to her mouth, she takes in again, and then going backwards she seems to draw out clammy threads, the which she devours the second time, and so by receiving in and casting forth she sustains her self. Those parts that are white do glitter in the dark with a wonderful splendor, representing terrestrial stars; inasmuch that they may seem to contend with candle or moon light. This is worthy observation, that that do bright lustre expires with the life; where then is that perpetual light which some foolish naturalists do foolishly and impudently prate of? some of them I have seen sometimes with wings, and sometimes in the fields, flying up and down in the streets and walls of the Cities.

At *Vicenza* in *Italy*, they say there are those somewhat bigger than ours; all over black; else they differ not at all.

They feed upon herbs, they continue long in copulation; as *Julius Scaliger* (a great Philosopher of our times, not behind any of the Ancients) hath diligently observed, whose words are these: *Cicindela volatans in coitu deprehendi*, &c. I lighted upon (saith he) the *Cicindela* or *Glow-worm* flying with her male in the act of copulation; the male being touched did not refrain they were put into a box with holes in it all night, the next day the male struck close; at noon the male let go and died. After which time about the evening many eggs were laid by the female, which within the space of twenty hours went away alive. This story *William Brewer* an Englishman, a learned man and my good friend affirms for truth, being an eye-witness thereof, seeing them once in the act of generation. They are long in the act, and so bring forth many insects, this the Philosopher confirms speaking of Insects thus in his 1. Book de gen. cap. ult. οὐρανὸν ἰδοὺ μὲν γένετα, she carries long in copulation but afterwards brings forth speedily: I could wish *Scaliger* had took notice what creatures came from those eggs, for so the story had been more perspicuous. Though yet according to the course of nature it be easy to judge. For what could come out of them, but those small *Erucæ*, black, thick and rough, of which *Arist.* hist. 5. 19. saith those *Glow-worms* without wings are generated. Of these then come the unwinged *Glow-worms*, and of them with some alteration the flying *Glow-worms* called *Bostruchi*. From whence it is to be noted, that either *Aristotle's* copy is faulty, or that the interpreters have committed two errors; they have altogether left out the word *μαλαχὸν* (which makes so much for the clearing of the story). Secondly, out of those being changed they say come those (which *Gaza* translated) *Cirrus*, altogether against the mind of the Philosopher, if the Greek copy be not corrupted. For so runs the Greek, *Ἐκ δὲ μαλακίου τινος ὁ δούλορ, &c.* Out of certain black rough small worms cometh the *Cicindela* without wings; out of which in the second place being altered into a *Chrysalis* cometh the flying *Glow-worm*; and out of them in the third place those which are called *Bostruchi*. But what

Insects

Insects those should be which of the Greeks are so called *βόστρη*, is not yet known, I believe there is not much difference between them and the former. *Ephefius* a Greek Author a Commentator on *Aristotle*, saith that the *Bostruchi* are generated of the *Glow-worm*, and are called by the country people *Circa* or *Plata*; as *Niphus* translates *Ricini*, i. e. *Tyke*. Therefore in the judgement of *Ephefius*, that *Bostruchi* or *Ricini* take their original from the winged *Cicindela* with some alteration. But of the *Ricini* or *Tyke* in their place, *Calium* l. 9. *Antiq. lett.* c. 4. *Cirrhum* inquit dicere, &c. I had rather call the *Cirrhus* such a worm as that is, which according to *Dioscorides*, is of colour between black and white; but what that worm is, neither he nor any man else doth tell us.

I wonder at *Cardano*, who will have this *Cicindela* to come of the *Crabrones* ascribing their splendor to the polishing of the outward skin. *Ex Eruca in Crabrones*, &c. From *Eruca* they become *Crabrones*, or which is more likely, from *Crabrones* they become *Eruca*. Forasmuch as the Caterpillars called *Eruca* are bigger than the *Crabrones* or Beetles, and do shine more dimly, as it were spent with age, and then it is probable that when she ceaseth to fly, she layeth eggs. Here *Cardano* confounds all. For of the *Crabrones* come the *Glow-worms*, not of them the *Crabrones*. Besides it is not the smoothness of the skin that makes them shine, as he overhastily concludes; neither do the wings cause it, which of all the rest of the parts are most sleek; what *Cardano* means by his last words, I cannot tell. But of all the rest *Baptista Porta* and *Megisthiu* were grossly mistaken, who ascribe their original to the dew or tow.

They appear from the middle of June to the middle almost of September. Which *Pliny* expresseth in these words: *For before forrage is ripe or after it is gone they are to be seen*; and elsewhere, *when Glow-worms appear, it is a common sign of the ripeness of Barley*, and of *Sowing Millet and Parnick*. But this must be understood of the Country and place that *Pliny* then lived in. In all Countreys they have not the same time of Barly harvest, nor of sowing Pannick and Millet, though *Mantuan* sang to the same tune:

*That is the time your barley for to mow,  
When Glow-worms with bright wings themselves do show.*

Yet as I said before, the shining comes not from their wings. They shine not before the twilight in the evening, as *Politian* shewes elegantly:

*Then they renew their labour, till at night,  
The little Glow-worms shine most clear and bright.*

*Pliny* calls these glittering Flies, earthly stars; *Nature*, saith he, crying out and speaking to country people in these words: *Clown, wherefore dost thou behold the heavens? why dost thou seek after the stars? when thou art now weary with short sleep, the nights are troublesome to thee. See I scatter little stars in the grass, and I shew them in the evening when thy labour is ended, and thou art miraculously allured to look upon them when thou sleepest by?* Dost thou not see how that a light like fire is covered when she closeth her wings, and she carrieth both night and day with her? So far *Pliny*. Hence it is manifest that the shining doth not alwaies shew it self when she flies, though it shines forth both at her sides and thighs, because it appears not but to those that see her wings wide open, and lifted up, for where the wings are closed all the light is darkened. This flying *Glow-worm*, *Antonius Thylefius Bonseminus* described elegantly in these verses:

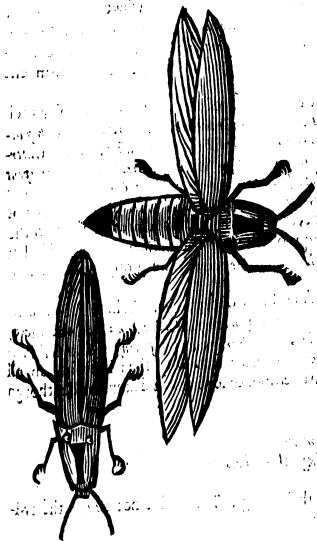
*This little fly shines in the air alone;  
Like sparks of fire, which when it was unknown  
To me a boy, I flood then in great fear,  
Durst not attempt to touch it, or come near.  
May be this worm from shining in the night,  
Borrow'd its name, shining like candle bright.  
The cause of one, but divers are the names;  
It shines or not, according as the frames  
Her self to fly or stand; when she doth fly,  
You would believe 'twere sparks in the skies  
At a great distance you shall ever finde*

*Prepar'd with light and lantern, all this kinder  
Darkness cannot conceal her, round about  
Her candle shines no winds can blow it out.  
Sometimes she flies as though she did desire  
Those that pass by to observe her fire;  
Which being nearer, seem to be as great  
As sparks that fly when Smiths hot iron beat.  
When Pluto ravish'd Proserpine, that Rape  
For she was waiting on her, chang'd her shape  
And since that time, she flyeth in the night  
Seeking her out with torch and candle light.*

Those that are without as well as they that have wings do send forth such a bright light, that by it you may read a great print. In this also they surpass Moon and Stars; for that clouds and darkness soon eclipse their light; where it is so far from obscuring the lustre of those, that it rather increaseth it.

Thus far of those *Glow-worms* which are found in *Europe*. Amongst those that are found out of *Europe*, that which the Inhabitants of the *Isle of Spain* call *Gencia* take the first place, because it yeelds a greater light, carrying a little torch before me in the dark. In Greek it may be called *αὐρομήνη*, because the light comes not from the tail but the head. It seems to be a kinde of Beetle, six times as big as the flying *Glow-worm* is

with us, not so great as a hazle nut, saith *Majestas*, but sometimes bigger than two hazle nuts, in length two inches, and as thick as a mans little finger. *Cardanus* saith well, that some of them are as big as the Hart-beetle; it hath a long head joynted to the body, the forepart whereof hath as it were in the middle a black spot in a manner triangular; it shoots forth short horns; the eyes are very big (so are the horns) standing out and black, and are placed near the mouth; the rest of the head is of a bright red, except it be two golden studs or bosses hard by the neck, out of which the glittering rays, especially when it flies and the wings are opened, do issue with marvellous glory; six black feet come forth of the breast: the Case wherewith the silver wings are covered, appears of a chequer colour; the body hath ten incisures or joints of a blackish ashy-colour. This Cicindele, together with the Figure of it came from a most skilful painter, who had taken strict observation of it both in the lesser Spain and in Virginia. In Hispaniola they are almost all the year-long, for they have seldom any winter.



In the Commentaries of Navigation this Glow-worm is thus described: The *Coccinella* is four times as big as our flying Glow-worm; it is of the kinde of beetles; the eyes whereof shine like a candle, with whose brightness the air is so enlightened, that any man may in his chamber, read, write, or do any necessary business. Many of them joynted together make such a light that an army may march by them whithersoever they please, manage all warlike darkness, rain, or storms whatsoever. Their wings being lift up and also towards their backs they shine very gloriously: the Inhabitants before the *Spaniards* came thither made use of no other light, neither within nor without their houses. But the *Spaniards* (because these lightsome creatures do by little and little lose their light with their lives) do use within doors about their businelle lamps and candles. But if they are to march forth against an enemy newly arrived, they make use of them to conduct them, and each soldier carrying four of them about him, divers waies coulen the enemy. For when as that noble traveller Sir *Th. Cornish* (that compassed the world) and *Robert Dudley* Knight, son to *Robert Earl of Leicester* first landed in the *Indies*, and that very night that they came ashore, saw hard by in the woods an infinite number of moving candles and torches as it were beyond their expectation, they thinking the *Spaniards* were come upon them unawares with guns and pistols, and much light, speedily betook them to their ships. Many other Insects of this kinde are there to be found. But because this seemeth to be of most account, and to have the preeminence above the rest, *Ovidius* hath left the rest undescribed. The *Indians* use to rub their faces with a paste made of them, that so their bodies may seem all of a flame. How this may be, since as is said before, the light vanishest with the life, I do not see, unless it be that the light may endure a while after they are dead, but that long it cannot remain is manifest by experience.

The *Indians* finding to great need of them, in that they could not rest in the night for the Gnats ringing them (the which these Glow-worms being kept in the house did as greedily hunt after as Swallows do Flies) and because they could not work by night without this junction of nature, before such time as the *Spaniards* came thither; they be thought themselves of some means whereby to catch them; the which I shall shew partly out of *Peter Martyr*, partly from those reports of others which were eye-witnesses of the same.

Whereas the *Indians* were constrained by reason of want of light to lie all the night idle, they got them out of doors with a lighted firebrand and crying aloud *Cucuis, cucuis* they do to beat the air, that either for love of the light they fly to them, or for fear of the cold they fall to the ground; which some with leaves of trees, others with linnen rags, otherwise with little nets made for the purpose detain, till they can come to take them with their hands.

There are other little flying beasts, which shine by night, but a great deal bigger than ours, and sending forth a far greater light. For they shine so bright that those which take long journeys make them fast by a way to their heads, and feet being alive; for so they may be seen afar off to the astonishment of those that know not the matter: the women use no other light to do their business within by night within doors but these. *Ovidius* saith

There are yet other worms of another form, which give light by night; as we read in the Commentaries of Navigation. In the Island called *Hispayola*, there are two sorts of worms which

shine by night. Some of the length of a mans little finger slender, with many feet, glistering so bright in the dark, that a man may see all round about him for fifty or an hundred paces easily. That clear light shines forth only out of the elicits; if you will the junctures of the body near the feet. There are others like to these in bigness, and altogether as lightome; but only that their light issues from the head. Those things we finde in the histories of Navigation. But whether these *Cicindele* be of the kinde of the *fuli* (as I think them to be); or whether they be like to ours is not declared. But I guess them to be by the multitude of the feet they have; for the Author reckons them in the number of the *Scolopanders*: *Valerius Cordus* in *Disco*. makes mention of the *Scolopander* (as he interprets it) whereas it is indeed a kinde of the *fuli* which in moist places, and in rainy weather, shine very bright. Such a one my friend *Brewer* found in England in the heath grounds, and sent the worm dried to *Plinius*. But that every man may better understand it, I shall set down his own words: I twice found a *Scolopander* that shines in the night (yet as I said they are kinde of *fuli*) in summer nights, of a shining nery appearance, in health and moist grounds. The whole body shines something more darkly than a glow-worm. He further adds, it once hapned that I came sweating home to my house at night, that I wiped my head in the dark with a napkin, the napkin seemed to me all over as a flaming fire; whereupon I wadded a while at this new miracle, all the lustre seemed to draw to one place, then folding the napkin together, I called for a candle, and opening the cloth, I found such a *Scolopander*, which I had rubbed against my head, and had caused this strange light like fire. This far *Brutus* who affirms that it was like to the *Scolopanders* commonly so called in gardens, and under stones and earthen vessels, wherein women are wont to set their choicer plants or slips. All the summer time and Autumn (saith *Gaudemius Merula* lib. 3. mem. c. 61.) in grassie ditches and without water, when I was at *Lebium* (which is now called *Amarius* fort.) I gathered little shining hairy worms in the night. The same I saw in the ditches about *Vigiliannum* (which of old was called *Vergeminum*) as *Simon Pons* and I were walking abroad in the evening to take the air. But what those hairy worms should be, unless they be a kinde of *fuli*, I do not know. There is another worm altogether unlike these of which we read in the *Book of the Nature of things*: There is (saith he) a worm like a star, which shines like a star in the dark, it is never seen but in great rains, and then it foretels fair weather to come shortly after. So great is the coldness of this worm, that it will just like ice put out the fire.

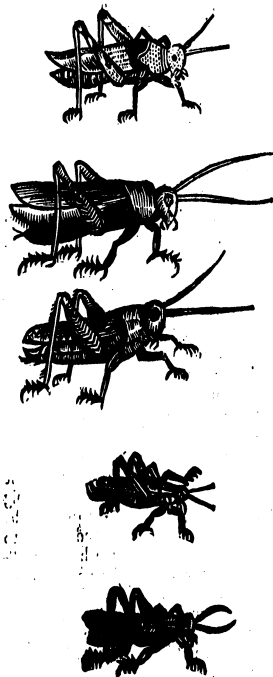
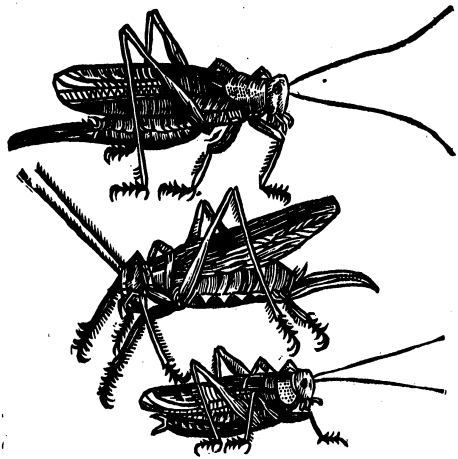
If a mans flesh be but touched with the slime of this worm, all his hair will come off; and whatsoever it touched therewith it changeth the colour of it into green. But all these he handleth untowardly, for he confounds the *Stellia* (which he here calls *Stella*) with the *Salamander* and *Cicindele*, and of these he maketh a very confused and imperfect history. Neither doth *Gualterius de Couchis*, nor *Vincenius* (which transcribed all almost out of *Gualterius*) in his obscure and dark tract where he reports this story, correct it. But these things are nothing to the *Cicindele*, and that which they write concerning the *Salamander* is other where amended: Hitherto of Insects shining in the dark.

Whether or no the Glow-worm being dead doth retain its splendor and shining, is wont to be a question. *Maffius* a very learned man, writing on *Pliny* his 9. Booke, saith it doth; and that boys taking the Glow-worms used to put about their heads the shining parts of them; with which if the hands or other parts of the body be rubbed, they also will shine in the dark. But by the leave of so great and learned a man as he is, experience teacheth the contrary. For after the Glow-worm is dead, that part whereof which so shineth in the night, though not presently, yet within a few hours after is quite lost; and seems altogether to go away with the vital spirits: this is a clear case, from experience; and I have often tried the same. This I will grant: if a certain number of those that have no wings (for those that have, shine not but only when the fly) be but put into a clear Crystal glass, so that the air may freely come at them, with a little glass they may perchance give light for the space of some 12 daies; if every day fresh glass be put to them; but at the length as they languish and faint away, to the light by little and little is remitted and slackened, and in the end they dying (as before is said) it is totally extinguished.

Vainly therefore do some boast of compositions made of them, with which they will keep perpetual lights as they suppose (amongst whom is *Cardanus*) as if they would bring down the moon from heaven. Others there are not learned only but unlearned also, who have committed these compositions to writings, whereby they might the better betray their own ignorance. Of this perpetual light *Albertus* makes mention, who in his Works gathers a whole bundle of flies together as it were into one body. And here now I will set down some of them that the Reader may be aware of them, and the vanity and levity of the writers; themselves may be manifested. Some there are which take a great many Glow-worms, beat them together, put them into a vessel of glass and bury them fifteen daies in horse dung. Afterwards they dig them through an Alembick, and keep the water in a clear glass. To this end *Gaudemius Merula*, who hath heaped up many things together from this and that Author, without any judgement, hath these words: Of these Glow-worms being purged, there is made a water, or a light rather, in a vessel which will wonderfully shine in the dark. Such a light doth this water or liquor give, by report, that in the darkest night any one may read and write, and do any other business as he pleaseth. Others left they should seem not to add to what is invented to their hands (for pregnant wits unless they bring forth some novelties are not well) together with the Glow-worms digst the gall of the Tortoise,



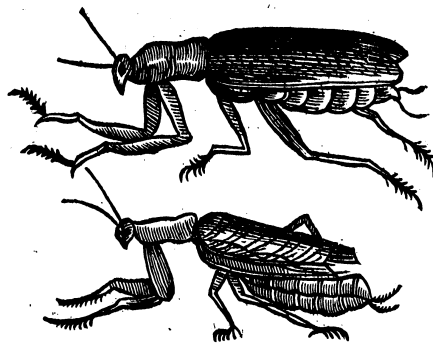
Now these are females, from whom the three males differ in this, that either in the end or above the tail they have two or three prickles or stings, and the middle of their hood appeareth more red.



The first sort of the lesser Locusts, called of the *Tigurines*, *Hollspecht*, is in body black, the utmost wings spotted, the innermost spattered with variegation; the thighs brown or swarthy, with black lines curiously drawn up and down. Of the second the cornicles, eyes, and shanks are of a pleasant red; the thighs or shanks are also diversified with black lines, the wings speckled, the belly of a dark red upon yellow, all which do exhibit a very fine pretty creature. The third seems to be of a dark ash-colour, the cornicles very short, and the wings of an unusual length, longer then the body. The fourth is all over of a darkish green, but that the hood is set with two black lines, and the ends of the shanks are of a lively shining red. The fifth is a little lesser than the rest, but in ordering and variety of colour, more pleasant, to the sight; the body's head, and feet are of a faint red, with green wings, and a golden lace drawn through the middle of the head very bright and shining.

All those of the lesser sort have wings as long or longer than their bodies, they have bodies no ting or prickle in their tail, nor bear any stem; they are seldom seen in the corn but altogether in meadows and pastures, as I have seen them in *France*, and our Country of *Britannie*: I have seen only three kinds very rare, i. e. *Italian*, *Greek*, and *African*: they are called *Mantis foretellers*; either because by their coming (for they hint of all appear) they do shew the Spring to be at hand, so *Anaxagoras* the Poet sang; or else they foretell dearth and famine, as *Calpurnius* the Scholiast of *Theocritus* have observed. Or lastly, because it alwaies holds up its feet like hands praying as it were, after the manner of their Diviners, who in that gesture did pour out their supplications to their

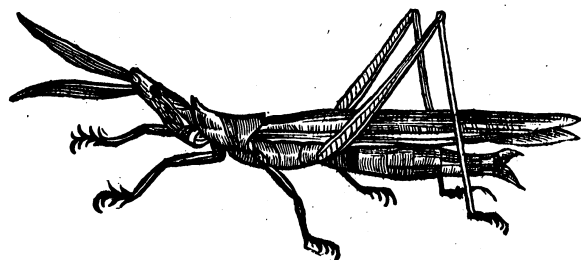
their Gods. Of this *Italian Mantis* (whose figure we do here represent) *Rondeletius* makes mention in his book de *Pisicibus*, in these words: It hath a long breast, slender, covered with a hood, the head plain, the eyes bloody, of a sufficient bignesse, the cornicle short, it hath six feet like the Locusts, but the foremost thicker and longer than the other, the which because for the most part the holds up together (praying-wise) it is commonly called with us *Preque Dieu*, the whole body is lean.



So divine a creature is this esteemed, that if a child ask the way to such a place, she will stretch out one of her feet, and shew him the right way, and seldome or never misse. Her tail is two forked, armed with two bristly prickles: and as the resembleth those Diviners in the elevation of her hands, so also in likeness of motion; for they do not sport themselves as others do, nor leap, nor play; but walking softly, she retains her modesty, and shewes forth a kinde of mature gravity. Though *Penninus* affirms that he often saw this kinde at *Montpellier*, yet in his papers he saith that he received the figure of it from the worthy *Antonius Saracenus*, a Physician of *Geneva*.

Another species of this *Mantis*, *Carolus Clusius* sent from *Vienna* exactly described, being brought thither out of *Greece*, which is like unto the former in shape and magnitude, but of another colour bestowen on it either by nature or the place where it lives; for it hath cornicles of a full yellow, the eye of hyacinth colour, the wings of a faint yellow, the rest of the body of Amethyst, only that the feet shanks, as also the joynts of them were more hairy and white, and the claws of the fingers bended backward were black.

I procured one from *Barbary* that was brought out of *Africk* with some cost to us, slender, five inches long, hooded, the head pyramidal, very long, out of which almost at the top came forth two little broad cornicles about an inch long, much like that Turbant, which the Tur-



With *Januaries* use with two feathers in it: a little below the root of it come forth two eyes standing out, great, and of a dark red, the body long, of a bloud red purple; the tail like a Swallow two forked, four wings of somewhat an ash-colour, deckt with certain dunnish spots; the four former feet and shanks very slender; the hinder strong, brawny, and long, and by reason of the spots drawn athwart all along the thighs blackish. And this of the common or ordinary and winged Locusts, and of the rarer sorts shall suffice to have been said; unless the Reader shall think fit with me to add more differences of them. The face of the ordinary Locusts is fierce, long, wrinkled, fenced as it were with scales, which even cover the mouth: in the upper part they have teeth fastned that are broad, black, and very hard, with which they easily eat cæs of corn, and scratch them with a great noise. The *Greek* and *African* Locust appears with a shorter



ter face, and the teeth are so weak that it can feed on nothing but the softest grass, and tops of hearts. The common ones have very long horns, but the *Manti* have very short ones; they have a hard breath, gristly, strong, none of these almost is faint or weak. They have also a soft belly, long and pointed, but these have a hard full brawny belly; both of them have four wings that are skinny and membranous, as made of the fibres of nerves; for though the inward wing folded seems two, yet it is but one, when it is stretched forth: which deceived *Jodocus Willichius* in his Dialogue of Locusts, for his eyes deceived him, when he writ that Locusts had six wings, which is false. It is very pleasant to behold in some Locusts their thighs with six angles, exactly smooth in their void places, and artificially painted in their netlike weavings together: the ordinary Locusts have great eyes putting forth, whence *Athenaus* calls one *Ebulus*, lib. 10. c. vii. *Agatholopus*, Locust of *d*; *Nigidius* said at large that Locusts could not see, as *Pliny* relates, lib. 11. cap. 37. yet have they clear eyes like glass, though covered with a horny membrane. Nature disproves this lie of *Nigidius*, which made their whole eye partake of seeing. As for colours, Nature that paints creatures, never was more bountiful in it, for though commonly with us they appear green, yet we see some of them red, yellow, crimson coloured, purple; and out of *Morocco* all white; and *Elian* saith that in *Arabia* they are of a golden colour, lib. 10. c. 13. de Animal.

Their Copulation and Generation.

Concerning the copulation of Locusts, I rather subscribe to *Valerius* (who hath searched diligently into their nature) than to *Aristotle* himself. They couple, saith he, (as I have seen) by the male getting upon the female, at what time he puts those two prickles that come out of the end of his back into the matrix of the female, and so they continue in conjunction very close and for a long time, in so much they can scarce with your hands be pulled asunder when once coupled, neither by leaping and motions, or any other way. The female being tickled underneath, moveth her womb very busily, and applying her self with the bottom thereof to the males, doth hold him for a long while, sometime with the opening of the matrix, sometimes with the shutting or closing of it again, augmenting the pleasure of her venery: for while the matrix is open the male gets into the bottom or farther end thereof; and when it is contrived or closed, she is delighted with the affliction and tickling of the womb and the passages thereof. Now here are to be seen two passages in the secret part of the female separated by a kinde of partition, and are covered over with a little thick cover, which in the outside is black, hard, and gristly, but within somewhat roughish, hairy and wrinkled; at the bottom of this the matrix appears which like that of Women.

Now the female bringeth forth (as *Aristotle* saith) the little stem that grows to her tail, being stuck in the ground, and then layeth all her burden together in the same place, not scattering up and down, but as it were like a honey comb. Hence proceeds a kinde of little worm in the likeness of an egg, included in a little earthy thin membrane, the which being forced open, come the Locusts and fly abroad. But (by the favour of so great a Philosopher) they lay eggs indeed in the beginning of Autumn, though not of the fashion of eggs, as I have seen with my eyes, and have had them in my hands. The which secure is so tender, that with the least touch it is bruised to pieces. Neither is it laid upon the superficies of the earth, but somewhat deeper, and in the winter under ground: where in the winter they being perfected by concoction in the subsequent year, almost at the latter end of Spring they come forth out of the shell or membrane aforelaid, wherein they were, being little blackish Locusts creeping up and down without either shanks or wings, which afterwards in a short time become bigger. They bring forth at the latter end of Summer, and when they have, do some they forthwith die, certain little vermine breeding about their necks (as it happeneth to the Beetle) in the time of their bearing, which do strangle them. These dying after such a foolish fashion as they do, are yet able at their pleasure, any one of them, if it do but fasten on his chaps, to kill a Serpent. In a wet Spring the eggs perish, but in a dry then there is a great increase of them. Some will have them to be brought forth and to dye twice a year, (in the number of whom is *Willichius*) that is to say at the rising of the *Pleiades* they come forth, and dye at the setting of the *Dog-star*, then others to be brought forth. Some say at the setting of *Arcturus*. In mountainy places, and of a thin air there breed no Locusts, but in plains and places full of cliffs and chaps; nor do they lay their eggs upon the superficies, but in the chinks and caverns of the earth, both that they may be the better concocted, as also better preserved from cold and rain.

That they should be generated of the carcase of a Mule or Ass (as *Plutarch* reports in the life of *Clemides*) by putrefaction, I cannot with Philosophers determine; first, because it was permitted to the Jewes to feed on them: secondly, because no man ever yet was any eyewitness of such a putrid and ignoble generation of Locusts.

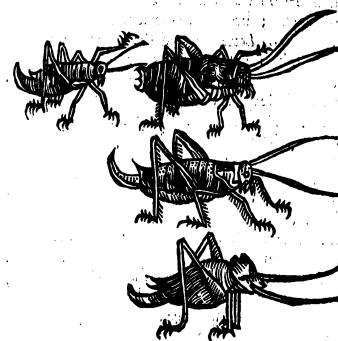
Their Death.

They dye several waies. For the male after copulation (wherein he carries very long, and as it is probable, till all his radical moisture, and all his spirits at once are exhausted with his venery) presently expires. As in like manner all the females as soon as they have brought forth, whether with vehemency of pain, or numerous seizure, I know not, the which being very great cannot chuse but spend and exhaust the strength thereof. Oftentimes also great swarms of them being lifted up into the air by the wind, which afterwards failing, they fall down into the sea, or standing lakes. They are reported to pass over to far remote shores, continuing their journey for many daies together, they are to be seen very great, and also they make with a noise with their wings, that you would think they were a flight of birds, and they darken the Sun. They

They come oftentimes out of *Africk* into *Italy* in great numbers, biting and gnawing all with their teeth, even the doors of their houses. Neither do they hurt the corn fields, pastures, meadows, The mischief gardens, orchards, with their biting only, but also with their black burning (stinking dung, and especially do, daily with their cholerick and bitter some or spittle, the which (as *Valerius* witnesseth) they want in great abundance out of their mowthes as they bite. Yet notwithstanding they are not venomous, the *Parthians* and certain of the *Ethiopi* live of them esteeming them very dainty meat. They are said in *India* to be three feet in length, their shanks and thighs when they are dry serving for sawes to saw withall. That found or noise which they make, *Aristotle* saith is made with the rustling of their wings. But according to *Pliny*, it seems to proceed from the hinder part of their head. But I suppose it is caused three manner of waies, by the grating of their teeth as they bite the herbs, with the clapping together of their wings as they flutter up and down with noise, them, with the rubbing of their hard neck and shoulders one against the other whilst they leap and themselves like soldiers armed with helmet and breastplate, are used to do.

Now we are to speak of the Locusts which have no wings, and those especially are *Bruchus*, *Atelabus*, and *Aspilus*.

The *Bruchus* taking his name from biting and devouring, may be called a Locust without wings, and is destroyed and devouring the herb of the field. Four sorts or species of them are here presented to view: the first is of the male, the second females. The Male hath a pale



blond colour circle or collar about his neck, under which hangs a double hood of a light yellow, and green, mixt; from the back to the tail it is set out with six leek coloured plates running across from the back to both sides. The belly, which is sufficiently great, with the three prickles of the tail, are of the colour of an herb newly prest out of the earth, of a yellowish green, as also the thighs, face and cornicles; but the shanks seem reddish. The first of the females is all over eruginous, but for a blond colour line running over the back from head to tail: it is without a prickle growing in the stem or tail; it seems also to be girt about with ten green plates, or rounds. The second is almost

all over of a light red and brown, the belly a little yellow with, the upper end of the stem it hath two prickles. The third hath a head resembling a hog's or sea-calves head, in stead of cornicles it hath a little beard on each side of the nose; the two bunches or swellings on the top of the forehead are like to the ears of a Bear, and it hath two prickles upon the stem very sharp and brown, of the same colour with the rest of the body. These did that famous knight Sir *Edmund Knivet*, freely send in picture to *Pennius* for the enlargement of this work, for he is a Knight that is very courteous to learned men, and singularly noble both by descent and virtue, and famous for his curious search into the knowledge of natural things. The Latines call them *Bruchi*, the *Moscovites*, *Chreast*; the *Polonians*, *Knucick*, the *Germans*, *Ramp*; the *English*, *field Crickets*. *Atelabus* is a small Locust, saith *Hesychius*, *Pliny* thinks it one of the smallest kinde; *Hierome* on the 3. chapter of the prophet *Nam*, calls the little off-spring of Locusts *Atelabi*; *Aquila* more significantly interprets them devourers. A little Locust is said to be the mean between a locust and *Bruchus*; it hath such little wings that it is reputed to have none, and seems rather to creep than fly: for this cause wheresoever it is bred, it bringeth all as it were to meal or rait, by grinding and consuming. It seems to come to be of the kinde of *Bruchus*, till the wings grow forth, and then it grows into the number of Locusts. *Stephanus* derives *Atelabus* from *atē*, because the wings seem so small as if it had none. The *Atelabi*, as *Aristotle* saith, do breed in fallow fields, as Grasshoppers do; they bring forth, and when they have brought forth they dye as other Locusts do; their eggs are spoiled by wet Autumns, when the waters increase too much; but in a dry Autumn, the *Atelabi* increase more, because their eggs escape drowning. *Aspilus*, or *Orō*, as *Diocorides* calls it, hath its name from its slow motion; it hath no wings, thick legs, but short withall, not like other Locusts, whence it seems rather to creep than leap, it hath a great belly hanging down, as if it were made to devour corn. This Locust it may be called in Scripture *Aspilus*, *Nicander* calls it *uulcus*, and *Aspilus*; though, as *Chitarchus* saith, in the Dialogue of the *Ambrosians*, all Locusts are called *Aspilus*, because they eat corn with a noise of their teeth. *Franciscus Stancarnus* writ a little Tract of seven kinds of Locusts, according to the Scriptures and Rabbins; but he described not those four which are numbered amongst clean birds that the Jewes might lawfully eat; those four were *Arbeis*, *Salaam*, *Chargel*, and *Chagab*, which the Chaldeans call *Gebab*, *Rhaschen*, *Chargela*, *Chargaba*; and the Greeks call them *Aspilus*, *Aspilus*, and *Aspilus*. *Arbeis* is a kinde of Locust, called so from her fruitfulness, as *Kimhi*, *Munster*, and *Broughton* observe. The *Septuagint* have translated *Salaam*, *Aspilus*; *Hierome* doth not rightly call

call it *Scorabæum*, for it is a flying creature, creeping with four feet, and leaping with its two hinder feet longer than the former feet. *Klimke* makes it a kind of Locust which the Rabbin call *Rhaichin*; *Abenezra* thinks that to be called *Salaam* that sits amongst stones; and *Himki* subscribes to this opinion; the forsaide interpreters called *Chagab*, *Chagab*, for it fights with the serpent, and stopping the chaps thereof, it kills the Serpent: *Aristotle Hist. p. cap. 6.* saith, that many have seen the *diabla*, the Locust called *diabla*, which when it fighteth with the Serpent takes him by the neck. *Niphus* needed not interpret that *diabla* to be the *Scorabæum*, or Viper; since the Philosopher calls it directly *diabla*, and the 70. learned interpreters lay it is a Locust: however it seems *Niphus* was so blinde that he thought it impossible for so small a creature to kill a Serpent, but we thought it safer to rely on the testimonies of so many learned men, (who had an insight into Locusts, and almost into all natural things) than upon the conjectures of so frivolous a Commentator and deviser of novelties. *Magab* or *Chagab* is called *Atelabus*; *Hieroma* calls it *Attacon*, as likely to be the most grievous; for this not only eats of corn or shears it, but breaks and grinds stalk and all. It is bred of eggs in a land fruitful for corn, which the female left there when the corn was gone.

Kindes of  
Bruchi.

Five other kindes of Locusts are numbered up, *Joel 1. Amos 4. Dent. 28. and Psal. 78.* namely *Gaza*, from shearing; *Jelak*, from licking; *Chazib*, from destroying; *Thebasab*, from the blasting and rust it brings to corn; and *Chennamah*, from staying; because where it sets up its station, it rarieth there, and forsakes it not. *Rodolphus Modius* on *Leviticus* and the Prophet *Joel* reckons divers kindes of *Bruchi*: Some are golden colour, others yellow, others gray; also from a whitish worm in frothy dew that in May flies to plants, a certain winged green creature is bred, in form like to the smallest kind of Caterpillars, first it leaps, and afterwards it flies, and therefore I think fit to call it *Locustella*, a little Locust. The English call that frothy matter *Wood-saw*, as if you would say the putrefaction of the wood. The Germans call it *Cuckew-sprite*: but what form that was of which *Suidas* calls *malakos*; *Celinius* *malakos*; *Nicander*, *malakos*; *Hesychius*, *ἀπὸ τῆς ἀμαλίας*, *ἀπὸ τῆς ἀμαλίας*; *Philoponus*, *ἀπὸ τῆς ἀμαλίας*; *Eustathius*, *ἀπὸ τῆς ἀμαλίας*; *Phavorinus*, *ἀπὸ τῆς ἀμαλίας*; and *malakos*; *Isidore*, *malakos*; truly I cannot tell, and I would gladly see some *Oedipus* who would declare their nature and use. But because *Marcellus* affirms that there are some Locusts that use but two wings; and *Willichius* ascribes to some six wings; they should either have described them, or have held their peace in a matter that exceeds belief. Also he slips very absurdly, when he assigned a King and a Monarchy to be amongst them. May be amongst many little ones he found one great one, and saluted him for their King, because he excelled in magnitude; but *Solomon*, (that was of Philosophers and wise men the chief) saith they have no King, but are subject to a Common-wealth as *Pismires* are.

The mischiefes  
Locusts doe

How God by these very little creatures did punish the pride and haughtines, and hard heartedness of *Pharaoh*, is apparent enough out of *Exodus*, and is spoken of every where. In the year 170. before the birth of Christ, all the meadows almost were covered with clouds of Locusts, and a hundred years after about *Capua* a great multitude of them filled the country, *Julius Obsequens*. In the year after Christ, 181. the war long enduring in *Illyricum*, *France*, *Italy*, and at last being ended, that nothing might be wanting to punish those Nations, an innumerable company of Locusts, and far greater than the ordinary ones, consumed all the gra's round about. In the year of our Lord, 591. when *Agilolphus* reigned in *Lombardy*, a very great plenty of Locusts afflicted the Country about *Trent*, which are reported to be brought out of *Africa* by force of the winds; but the greater part of them were cast down with Storms and drowned: but they were no less hurtfull and deadly to the *Italians*; for by the waves they were brought to the shores of *Cyrenis*, and by their venomous stinking smell, they caused such a plague amongst mortals, that *Julius* writes, that of men and cattel there died above 800000. Also at *Venice*, and about *Brescia* for want of corn, (for the Locusts had consumed all) so lamentable a plague followed, that in the year 1478. when these things hapned, above 30000. men died of it. Again in the years 593, 693, and 811. Locusts came flying out of *Africa* after a great drought, that devoured plants, herbs, and barks of trees, whence followed a strange famine, and such as is elegantly described by the Author of *Namachis*, in these verses:

The muske childes of death,  
Famine was present with her empty veins  
The poor with hunger starved, their breath  
was spent; for neither brash nor bread remains:  
Upon their mouths and guts hunger laid hold,  
They move their chaps, and bite their teeth, not meat;  
Through wrinkled skin their bowels might be sold:  
Nothing but skin and bone, they'd nought to eat.  
In stead of belly stood an empty place,  
The breast hung down, and seemed for to stay  
On the back bones rough grates; pale was the face,  
Lips white, eyes sunk, teeth stark, all was like clay.

Nor was *France* free from their teeth and devouring, but in the years since the time the Virgin brought forth her son, namely in the year 455; 874; 1337; 1353; 1374. was militarily wasted, and the Citizens consumed by famine, and very many killed by a plague that followed it, and sometimes it lost a third part of the inhabitants. These Locusts had commonly six wings, and were brought thither from the East. But at length by force of winds they were carried into the British Sea and drowned there: but by the flowing of the sea they were cast to the shores, and infected the air, and caused a plague no less cruel than the famine that went before. *Otho Frisigius*. Also in the year 1476, they waited almost all *Polonia*. In 1536, innumerable troops of Locusts were brought by winds from the Sea *Ensinum* into that part of *Sarmatia* which is called *Podolia*, they did change their camps in a military order, and they eat up all that was in the fields where they pitched both by day and night; these of an unusual greatness at first wanted wings, then their wings growing forth, they flew at pleasure; and what shall I say? they eat not only herbs and leaves, and flowers, but hardly lay any bark on the trees. Then they wandered through *Germany*, and came as far as *Millen*, and having devoured all there they returned to *Polonia* and *Silesia*. At last in *November*, for so long they lived, when they were consumed by force of cold, they raised such a stench, that had they not been eaten up by hogs, and wilde bores, they would have caused as great a plague, as they had done a famine in *Germany* and *Italy*. In the year 1543, Locusts did a very great mischief to the Countreys of *Misnia* and *Marchia*: at which time they were so frequent in *Lucania*, that being in heaps they were above a cubit high, *Jacobus Egelius*. In the year 1553, it is commonly known what great damage the mighty company of Locusts did at *Arles*: whilst we were writing this, we received news that the *Spaniards* were sorely afflicted with swarms of Locusts brought thither out of *Africa*. For they flew like Armies through the skies, and darkned the air. And the people when they saw them, rang all their bells, shot off ordinance, sounded with trumpets, tinkled with brazen vessels, cast up hands, did all they could to drive them away; but they could not obtain what they desired, wherefore sparing their labour in vain, they died every where of hunger and contagion: as the Mariners and fleet-men reported to us, who escaped very hardly from that danger themselves. *Entropius lib. 4.* makes mention of very great Locusts, which were seen not far from *Rome*, to the wonder and amazement of the beholders, the inhabitants were so afraid of them, for their devouring nature, that they were frighted at their sight. Hence we may collect that those creatures are not the smallest amongst the Armies of the Lord of hosts, when he pleaseth to punish the sins of men, and to revenge himself on the despisers of his Lawes. But as his Justice is admirable, so in his greatest severity Mercy is not wanting: for being that Locusts have brought sundry Nations to want and hunger, and they have had no thing to eat, these Locusts have died suddenly, and became meat for the people they afflicted before: the people of hot Countreys, Their Use. (whom especially they spoil of their increase of fruits) as the *Æthiopiens*, *Tagestenses*, *Partians*, *Arabians*, *Lybians*, *Mellenses*, *Zemenenses*, *Darienenses*, *Africans*, and those that live about *Leprie*, the *Azangis*, *Senegenses*, people of *Mauritania*, and others, live chiefly upon Locusts, and account their eggs to be dainties; others prepare them thus: First in a low large place they make a great smook, by which the Locusts in flying are hindered and forced to fall; then when they have taken them they dry them with salt, the Sun and smook, and cutting them in pieces they keep them for their yearly provision, as we do fish, not only those which have large legs, but the *Atelabus*, the *Astis*, *Afraxis*, and almost all kindes of Locusts, as we collect out of *Discofides*, *Strabo*, *Pliny*, *Solinus*, *Agatharhis*, *Plutarch*, *Avicenna*, *Posidonius*, *Leo* and *Dionysius Africanus*, *Ælian*, *Diodorus Siculus*, *Alopius*, *Cadmusus*, *Agricola*, and the Centuries of Navigations, whence they were called *ἀνέσθησις*, Locust-eaters. Yet though they accounted them amongst their choicest meats, yet the *Grecians* esteemed them but for meaner fare; if we belevee *Aristophanes* and *Plutarch* in *Sympot.* where he calls them the Sustainers of the Countreymans table: S. *Matthew* in the 3. chapter, saith that *John the Baptist* lived upon them and wilde honey; and God appointed four Levites of them to be clean, and suffered the people of *Israel* to feed upon them: whosoever desireth more concerning Locusts for food, let them read the most learned Annotations of Venerable *Bede* upon St. *Matthew*. They have no venom in them; yet they that feed on them are not long lived, and seldom live to 40 years, and frequently die young, as *Diodorus Siculus*, *Agatharhis*, and *Strabo* have observed. St. *Ambrose* saith that Locusts hurt neither men nor fruits by themselves, but nourish them; and feed not on fruits unless God command them. But when God gives the word, they kill men, spoil the ground, and execute the vengeance of God. *Mantuanus* as I said, shewes travellers their right way; *Ophiomachus* kills Serpents, all Locusts forsooke the Spring, and what is more acceptable to us? and if by so great multitudes they foretell of famine, by that they sweetly invite us to prayers and repentance; they live so lovingly together, that they stand in need of neither King nor Emperor; for they fly together as *Solomon* saith, Prov. 30. without a King and live in concord, whence is that saying of *Ecclesiastes*, Thy keepers are as Locusts, and thy children as the young Locusts: that is, not only numerous, but unanimous, and conspiring together.

What concerns their use in Physick, the Locusts are serving to that end also: for their smell their use in cures the Strangury, especially of women. *Discofid*. Bread eat with the flesh of Locusts, is good Physick. for those who are troubled with the Stone: fried Locusts take away the roughness of the nails: Locust legs bruied with Goats tallow, cure the Leprosie. *Pliny*. *Mantes* cure hard scrofulous tumours.

Not

mors. *Asellus* dried and drank with wine are excellent good against the stinging of the Scorpion, *Attalabi*, cure the stinging of Bees, Wasps, Hornets, and hurts by Bloud-fuckers, *Dioscorid.* *Eupor.* and *Pliny* 29. 4. *Arnoldus* prescribes this composition for the white skins of the eye for dimness, and a cloud, *Breuiarius* lib. 1. c. 16. Let the Locusts be not altogether green, nor wholly black, struck a string through them and strangle them in a little White-wine, then dry them in the shade, then take *Primros*' roots, and Fennel roots; dry and powder them, and mingle them with the powder of the Locusts, then keep the powders bound in a cloth, in the said White-wine in a brazen vessel; of which wine (the cloth being first gently crumpled) drop two or three drops into the eyes: As for their quality and temperament; unaltered they heat a little, they inflate, increase seed, stir up venery, when they are altered it seems they are of worse juice, they cause thirst and burn the blood; yet they hurt not dropie persons, nor such as are leucophlegmatical. *Silvaticum.* Farther, to touch upon other uses of them; Locusts, their feet and wings taken away, are good to feed young Peacocks, *Columella.* Frogs about lakes, and many fish feed on Locusts, which is so well known, that *Bellonius* witnesseth the same. Also the *Salucians* have a bird feeds on Locusts, as *Hesychius* remembers. Jackdaws do also devour them; wherefore at the publick charge they are maintained in *Thessalia*, *Illyrium*, and *Lemnos*: for they not only destroy Locusts coming, but they also devour their issue, whereby corn is preserved unhurt. Also they are food for Rooks, Choughs, Hens, Geese, Ducks, for Hogs also and sheep, as besides histories, and long experience, *Plutarch* witnesseth in his book of *Ips* and *Osiris*. Lastly, if any credit may be given to *Aponofaris*, a man most learned in the learning of the *Indians*, *Persians* and *Egyptians*, to dream of the coming of Locusts is a sign of an Army coming against us, and so much as they shall seem to hurt or not hurt us, so shall the enemy.

Now it will be time to shew by what means the over great abundance of them may be driven away by the providence and wisdom of man, and so I shall conclude this Chapter. *Pliny* saith, that in the Countrey of *Cyrene*, it was ordered by a Law, that thrice in the year they should war against the Locusts. First, breaking their eggs, then destroying their young ones, then by killing the grown Locusts. If any failed of this duty they were punished for their default. The *Magassii* and *Ephesians* march out in military order against them. It is no wonder that divers Nations took counsel how to destroy so cruel an Army, whereas in divers places of *Africa* and *Mauritania*, they are so numerous and mischievous, that they force the inhabitants to seek out new habitations. We observed out of *Pliny*, *Valerius* and *Pencernus*, divers waies to break and destroy their eggs. At the entering of the Springs, rivers are turned upon the places where their eggs are, so that they abundantly wet all the surface of the earth, or the greatest part of it. If the place be so situated that they cannot do this, multitudes of men trample over the ground, so that no place is left, that is either higher or deeper than the rest; if they cannot prevail with this effect, they use a drag, a harrow, and a rowle that are very heavy, such as Countrey-men use, that they may the more easily bruise them, and level the ground the better. Also abundance of military Chariots would do no hurt here, for by frequent and often running up and down with the wheels, they would break the eggs: I should also commend the use of the plough, which would dig and turn up the earth, and cut the nests of the Locusts. Some counsel to fright the old Locusts with ringing Bells, sounding Trumpets, beating Drums, and by discharging great Guns, to make that terrible *Salutarian* noise, that may drive them away; some think that by great cries and shoutings of men, they may be terrified, as if the beating of the air might shake them, or as though they heard any of those terrible noises, as some absurdly dream. Others make deep ditches in the fields, and with crackers that beat the air, drive the fearful Locusts thither by degrees, and when they are come into these ditches, they are suddenly overwhelmed with earth, or calling in rubbish, they cover and destroy them. Some affirm that they are taken with pickle made with Locusts, that by it they fall suddenly into a deep sleep, and afterwards dye. By these acts, saith *Valerius*, the Locusts that vexed the people about *Aris* were destroyed in twenty daies time. In *Syria* they fight against them in a souldierly posture. In the Island *Lemnos*, all Souldiers are bound to bring a certain measure of Locusts to the Magistrates every day. Some Nations, as I said, feed Jackdaws at the publick cost, as on occasion is they may destroy the Locusts. Moreover the birds, namely Storks, are called *Selenides*, which the inhabitants of the Mount *Cassian* formerly obtained to be sent by *Jupiter* against the Locusts that destroy'd their corn. These birds come yearly to help them, but whether they fly back, or whence they come, no man can tell. So soon as the Locusts are destroyed they forsake the Mountain, and go home again. Our new Authors mightily commend the smell of brimstone, and of gun-powder, and think they will kill Locusts by their smell; but if a cloud of Locusts or swarm come tumbling into a land, let all the inhabitants lie close in their houses, for if they see no man in their journey, they will readily pass over that countrey, or else they will easily remain in that place. But if they be come before it be observed, they will touch no herb nor corn, nor any thing that is sprinkled with the decoction of bitter Lupines, and wilde Cucumers, for they perish so soon as they touch them. It may be the decoction of the lesser Centory, Wormwood or Walnut leaves would do the same. Also they are said to passe from those places where bats are hanged aloft on trees. Moreover, if you burn Locusts taken in piers, the same way as I said, that smoke will either choke the rest that are near, or will make them fall down, that they may be easily taken with your hands, or they will dye of themselves, being afterwards weakened with the Sun. If you would defend vines from

How they may be killed and driven away.

from them, sow three grains of mustard-seed near the root, for they sprouting up afterwards, will by their sharp sent, kill all *Bruchii* and Locusts whatsoever that come near them; as the *Geoponicks* of *Cassius* and *Dionysius* *Uicenis* (not rightly ascribed to *Constantine* the Emperor) do periwade us. *Aristot.* 4. hist. 8. saith that Locusts are driven away with the smoke of Brimstone, Harts-horn, or *Scorax*. *Palladius* from the rules of *Democritus*, lib. 1. tit. 35. writes that Locusts will hurt neither corn nor trees, if many river or sea Crabs be put in an earthen vessel with water, and be covered and set in the Sun, that they may evaporate so for ten daies, then whatsoever you would have take no harm, sprinkle with that water every eight daies, till the corn be perfectly grown. *Arnoldus* saith that Locusts are driven away with the smoke of Ox or Cow-dung, or the smoke of the left horn: but why doth he superstitiously exclude the right horn? for reason and nature hold right to be better than left. The Magicians trust much to their trifling charms, whom *Pliny* hath lib. 37. cap. 9. charged with extreme madness, and vanity unpeakable. I shall say nothing to detain you with. *Pencernus*, lib. de *Divinat.* gener. writes that the *Romans* when they knew not the true Gods, whensoever they saw swarms of Locusts, used fasting, sorrow, sacrifices, and all means to pacifie the angry gods, and afterwards they more carefully adored *Jupiter*, who drove them away. *Eudoxus* saith, that the orientall *Galatians*, upon such a tempest, come to the god of Birds, and despatch him often to drive away the Locusts that swarm in their lands. This should admonish Christians that are entered into the sides of the true God, and are instructed by the perfect lights that the sure way to drive from us hurtful Locusts is to call upon God by prayer joyned with true repentance and unfeigned piety, without which all our force and inventions will come to nought, nor will all our devices avail at all. For I highly approve of that saying, For all remedies without Gods assistance are idle enterprises of men, but when God is pleased, and blesseth the means, then are they remedies indeed.

## CHAP. XVII.

## Of Grasshoppers and Krickets.

Of all the Insects making a stridulous noise, the Grasshopper challengeth the chief place, and by great right too. For in the heat of the day he sends forth a most shrill and musical sound, sustaining his life with dew without doing any harm to herb or trees. Amongst the Greeks he hath divers names, according to the diversity of Countreys, generally and by a common name he is called *τρίψ*; by the *Eleans* *Βέκκος*; by the *Sidians* *Κύβη*; by the *Cretians* (as *Bellonius* saith) *σπερσός*; by the Countrey-men of *Sicilia*, *βρο*, because it lives by sucking out of the dew. They attribute also divers names and appellations unto it from its sex, age, bigness, and singing. For the female which doth not sing at all *Albian* calls *μυρμή*; *Stephanus* *καλαμίν*, that sings not; *Eustathius* thinks it is not a Grasshopper, but another kind of creature like it. So doth *Athenians* 14. from *Spanippus*, *τὴν κατὰ τὸν βοῶντος τῆς καὶ τρυγίης*, like to a Grasshopper, or the Bird called a small Turtle. Indeed the words of *Lia* out of *Alexis* cited by *Athenians* in his *Thesio*, give in a large testimony to the same, both that the *Cercopa* had a voice, and was of a divers kind from the *Cicada* or Grasshopper (I never saw the female *Cercopa* nor the *Pye*, nor the Nightingale, nor the Grasshoppers male) unless perhaps the Grecians were wont to keep together in their caves the male and female Turtle, so we should say they joyned together in like manner, the male Grasshopper and the female *Cercopa*; for that they did not only keep them together with the *Pye* and the Philomela, for their singing sake, but that they might behold their mutual embraces, dalliance and lustful pleasure. Add to this that *Athenians* calleth it *καλάνης*, or the more talkative; for as he is from ascribing all the business of singing and making a noise to her male, contrary to the custome of the female.

The Grasshopper when it cometh to be old is called *τρίψ*, when young and tender *μύρμη* and *μύρμη*, as *Hesychius* observeth. The little Grasshoppers (which *Gaza* calleth *Cicadastres*, and we *Cicadula*) the Greeks call *μυρμή* and *μύρμη*, which signification I wonder that it is passed over by *Stephanus*. The word *καλάνης*, put substantively, signifieth the least Grasshopper of all, as *Eustathius* witnesseth. *Trifolium* also do signifie the lesser Grasshoppers, as we read in *Callinus*; although *Eustathius* will have them to be creatures of another species, like to Grasshoppers, as elsewhere he calls them the females of Grasshoppers. Their *Dionysius* will have to be called of the Greek word *τρίψ*, from the sound they make. The more vocal and obstreperous of them called *μυρμή* are the *Achærai*, or the Males; making indeed a very pleasant and musical noise. The other being mute and more wilde are called *Sigalphus* from their silence, as also *Acanthii*. In Arabick, *Giwlo* and *Cicualis*, *Yulderitiche* and *Robiche*. *Silva*. *Cicava* is a barbarous word of a Latine or Spanish word corrupted. In Italian *Ligallo*, *Cicava*, and elsewhere *Lavencala*; In Spanish *Cigarras*, and *Cigarras*; in Germany and England I do not hear that there are any Grasshoppers to be found, but if they be, they are in both Countreys called *Bowkrickels*, or *Bantm Krickets*; in Flanders, *Frisidwefin*; of the Walloons, (if I mistake not) *Straffen*; in Polonia, *Konick*, *Zymayon*, *Spiera*. Sometimes the name Krickets and Grasshoppers, are promiscuously used, which cannot be, unless you will say that the Kricket is a Grasshopper without wings. The Latines as

some that hunt after words will have it derive the word *Cicada*, *quasi cito cadens* (i. e.) quickly perishing. And that indeed is the Epithet that *Arist.* gives it, *ωυμενος τριβη*, the short lived Grasshopper, for so indeed it seems to be.

Of the Grasshoppers, some are more common, others more rare. The common and ordinary so hath the head big, and bending downward; and is of the figure of a *Pentagon*, terminated with unequal sides; it is of a blackish green colour, having on each side two bunches or bosses of the same colour, but of an oval figure, and edged about with a dark coloured margin, and a line or streak of the same running along cuts the bosses in the middle; the letter *lam* of a pure black colour parts the head right in the middle; it hath eyes of somewhat a dark green, prominent and big, considering the bulk of the body; insomuch that I wonder that *Nigidius* (that denies that they have any eyes) could not see them. But indeed as *Aristotle* saith they are very dull sighted. For if you bend your finger and put it back toward their eyes, they will rather come towards you than go from you, and will the sooner get upon your hand being drawn thereto by the shadow of the finger: the head or rather the face looking upward, appears of a weak green from white.

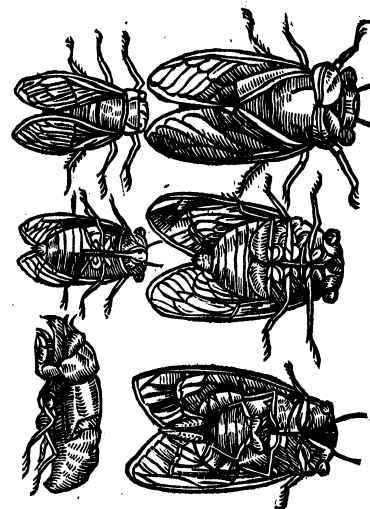


The Grasshopper amongst the Insects, is the only one of those kinde of creatures that is without a mouth, but hath it otherwise supplied, by a long kinde of compact fast substance, which like a pronucis supplieth the place of a mouth and tongue fashioned round and hollow like a pipe or guttar, relieved for the most part within, having ten lreaks running athwart it, with the which it sucks the dew, the only nutriment that it hath, and which is peculiar unto it, as *Virgil* saith, *Pascuntur dum rure Cicada*: Whence it is in *Athenians* that the question is controverted, afterward concluded, that water alone is able to maintain life, because with it alone the Grasshoppers are sustained. Hence it is that elsewhere he repeats the saying of a certain Parasite to this purpose *ὁ δὲ τριβὴν ἵδν' ὡς ὅτι, ἰ. ε. I am not such a one as*

liveth on dew nor herbs. And that of *Theocritus* is very like it: *Doth he live on dew like a Grasshopper?* Away then with that Fable of *Æsop* which is commonly received, that the Grasshoppers begged food from the Ants, for we may learn out of *Plato*, that the Grasshoppers are consecrated to *Apollo*, and the Mules bestowed on them this boon, that they should live only by singing, not so much as mentioning the dew. We shall also pass over those inventions of *Taxar* as not worth the mentioning, who reports that the Grasshoppers are alwaies provided with food in great variety. It is reported by *Antonius Alvarius* in his Book *de Manna*, that the Grasshoppers do suck the juice out of the bark and leaves of the Ash-tree, or Elm chiefly, the which we call *Manna*, but yet it is more likely that they suck it off from herbs, or out of them, as the Butterflies do, both because they are alwaies found to be empty within, and for that they are not perceived to void any thing, unless it be when they have taken in a little more dew than ordinary, they cast out of their bodies the superfluity thereof, as the Countrey men have observed.

The body is fastned to the head by a very short neck, or rather none at all: indeed, the shoulders are spotted with green and black, the breast is of a bright green well towards white, out of which come three feet and shanks on each side of a leek colour; the belly in the bigger sort is two fingers in length, and one in breadth; the inner part of the belly resembles a target ending in a sharp point, and is compassed about with an hem having twelve or thirteen joynts in it; within appear certain inclures of the same colour with the belly; the males (that is the least of the two) have the end of their tail forked; the females on the other side whole; their back is blackish with seven or eight green lines or inclures drawn athwart the same; the wings very curious, of a silver colour, and painted with dusky spots and specks very trim, the outermost twice as long as the innermost, and more various: the dark brown is more rarely seen, which *Ladovius Armacus* a very diligent Chirurgion, brought from *Guinea*, and gave to *Pennius*: also Mr. *White* a rare Painter, gave him another brought forth from *Virginia*, it was all of an ash-colour, (it may be it was that the Greeks call *ἄσπλον*) but it was like the former in proportion, it hath both its wings silver coloured, but not at all, spotted, and the former green ones were. Those that live in quickets are most green and big, those that are found in oaks, or corn, or grass, are of divers colours according to the place where they be, and are far less than the rest.

But if we compare their Nature and conditions with mans, they being our servants, do excell their Lords and Masters in virtue; and may teach us manners. For they shew forth that harmlessness of conversation, that they will not hurt or abuse any creature; but we perverting the right



right use of things, can finde in our hearts many times to abuse even our parents themselves. What guests will be content with the diet of the Grasshopper; that is simple, mean and frugal, not iniquated with variety of dithes, or cookery, or curious mixtures? yea so far hath foolish curiosity prevailed with men, that unless flesh of contrary nature, and with them fruits, leaves, pices, liquors, be dressed together, they think their appetite unsatisfied, & their palate very much wronged, nauseating that clean and wholesome diet of their forefathers. Those can quench their thirst with a little dew: we with our diversity of mixtures do rather invite and increase thirst than allay it. They living in shrubs near to the earth (in which they had rather sing) yet notwithstanding lead a cheerful life, and with their high flained nores, do make the lowneis of their condition more easie to them. But we men if cast from any high place, we presently despair, and are afraid at every turn of the wheel of Fortune.

The Grasshoppers hold on singing from morning to night, without intermission very pleasant and sweetly; whereas many Preachers neither preach well nor often, scarce four times throughout the year: truly they may be ashamed being bred more civilly, to be admonished of their duty by a wilde musician. These if you scratch or tickle their belly (as Poets which were commended) sing more shrill; but those speak them as far as possible may be, yea invite them with gifts, yet (like the *Argonauts of Marius*) neither use the care, nor lift up their eyes or hands to the styles. Moreover these agree all together in one time, and bestow their mutual help in their affairs. But I would to God these did not wholly busie themselves in sowing strife, and breeding controversies, that they did not wrangle together about wool and flax, figures and forms, and ceremonies, and of things decent, undecently and unseemly. True is the proverb of *Theocritus* concerning them, *τρίβη τριβὴν ὁλοῦ*, the Grasshoppers are a friend each to other; but man who ought to be a God to man, rather proves a wolf and a Devil, and putting off the nature of a man, tears up his own bowels.

Amongst the Grasshoppers the females are silent; the males do in a manner loath ventry, neither are drawn unto it but by many enticements of the female. But our women have more tongue by far than men; and the men behave themselves more lasciviously than women. What is to be

added further. The Grasshoppers of all other Insects seem to be without passion, but the perturbations of our mindes do carry us on so headlong, that upon every slight cause, yea none at all, we wax hot with anger, pine away with grief, burn with envy and jealousy.

Now for the musick which the Grasshoppers make, amongst all the Insects there is none like it accounted so sweet amongst the Ancients, that they equalled it to the sound of the Harp, as *Polux* writeth; and it may be *Lucretius* thereto called Grasshoppers *Teretes*. When *Timon Sillographus* would commend the eloquence of *Plato*, he compared it to the musick of the Grasshoppers: his words are these: *Plato sings sweetly, and as well as the Grasshoppers*. They begin to sing in the heat of the day, even at what time the reapers would otherwise leave work, wherefore those laborious chanters get them up into trees, and there fill the ears of the labourers and passenge with their melodious noise. For as musick is a kinde refreshment and recreation to the fainting spirits and tired brain, so the unaffected notes and lyes of the Grasshoppers, and the earliness of their contention in singing, doth serve as a spur to provoke men to endure labour,

labour, and doth not only invite the reapers to gather the fruits, but detains them in their work.

Of the strife between *Eunomus* of *Locris*, and *Aristo* of *Rhegium* two Harpers, and *Eunomus* getting the better, by reason of a Grasshopper flying to his harp and sitting upon it and supplying the place of his broken string: read *Antigonus Mirabilium narrat.* l. 1. & *Strabo Geograph.* l. 6. Of which contention also *Solinus* makes mention: and indeed the Ancients by the Grasshopper understand Musick, and therefore they painted the Grasshopper sitting upon *Eunomus* Harp, as the known Hieroglyphick of the Muses, as *Strabo*, *Phlegeron*, and *Pausanias* give us to understand.

With the *Athenians* it was the symbole of Antiquity and Nobility, and to that end (as now the *Spaniards* doth the golden Fleeces) so they wear golden Grasshoppers embroydered on their Hair, from whence they were called *triphobos*. The Author of the *Anthologies* saith further in his third Book, that the Ancients had the Grasshopper in such veneration, that they made a monument for it in the Promontory of *Tanarus* in the Countrey of *Laconia* and engraved a very elegant Elogy thereupon in its praise; to which *Orus Apollo Hieroglyph.* 2. doth subscribe. In a word, there is none to whom the musick of the Grasshopper can seem harsh or unpleasant, but is either not well at ease in his mind or his body, and so can be no competent Judge of musical strains. The Grecians had them in such estimation, that they kept them in Cages to please their ears with them.

Now to adde something concerning the manner how they make this noise, and then to proceed to their original and death. This stridulous and obstreperous noise they make, some think to be caused one way and some another.

*Pierius* thinks it is formed in the snout or promucis: *Proclus Diadichus*, by the rubbing together of their wings, *et rictu adu. cum rictu aliquis rictu laulis et rictu rictu*, that is to say, The Grasshopper sings by frequent clapping of its wings together, and so it makes a noise. And the same thinks *Hesiod*. But that they sing not with their mouth all men know, as neither by the rubbing of their wings together as the Locust doth, but by the reverberation of a little membrane under the *labelli*; (so they call those two coverings behinde the hinder thighs cleaving to the belly) or as *Aristotle* describes it in brief. They make this noise by reason of the air striking against the membrane under the midriffe; for by that means it being distended or remitted, and forced up and down, there breaketh forth a stridulous sound, such as the boyes make with their reed or oaten pipes, which have a thin skin, which being pressed down, shaken or intended, it mult make a sound. And this is the reason why the female Grasshoppers sing not at all, because they want that space between the thighs, where this thin membrane growes in the males and causes this sound. Others make the females to be more cold by far than the males, and that they make the cause of their silence. But forasmuch as Eunuchs, old men, and old women, make most noise and greater than young persons that are more hot, therefore frigidit cannot be the cause. Add further (if we will stand to the judgement of *Hippocrates*) that women are more hot than men; but if they be not so, yet it must needs be acknowledged, that the female Grasshoppers are more hot than the male, because under the midriffe they are not so divided, as the males in that place (were it not for that little membrane to hinder) they might easily be blown through. Nature certainly intended by denying a voice to the females of these Grasshoppers to reach our women that lesson; *domi placet ut quae il, dya qd, what ornaments silence brings to the female sex.*

They begin first of all to sing about the latter end of the Spring, the Sun being come past the Meridian, and perchance in hotter Countreys sooner, where quickers of such sort are more rare, where they live more happily, and sing more willingly. For they are of all creatures the least melancholy, and for that reason they do affect not only green and pleasant places, but also open and high. Yea they are not to be found in those places where there are no trees at all, nor where there are too many and too shady. Hence it comes to passe, that *Arifoph* saith, that in *Cyrene* in none of the fields there is there any Grasshoppers to be found, whereas near the Town they are frequently heard. They thus all cold places, indeed they cannot live in them. They love the Olive tree, because of the thinness of the bough and narrowness of the leaves whereby they are lesse shady.

They never alter their place, as neither doth the Stork, or at least very seldom; or if they do they are ever after silent, they sing no more; so much doth the love of their native soyl prevail with them.

In the Countrey of *Miletus* (saith *Pliny*) they are seldom seen. In the Island *Cephalonia* there runs a River, on the one side whereof there is plenty of them, on the other in a manner none: that which I should take to be the cause, is either the want of trees, or the too much abundance, or else a certain natural antipathy of the soyl; as *Ireland* neither brings forth nor breeds any venomous creature: for the same reasons they do not fancy the Kingdom of *Naples*; although *Niphus* relates that to be done by the enchantment of one *Maro Timaeus* that writeth the History of *Sicily*, reports that in the Countrey of *Locris* on the hinder side of the River *Hicli* they are marvellous loud; on the other side toward the city of *Rhegium* there is scarce one to be heard: they are not therefore silent because *Hercules* prayed against them for disturbing him of his sleep, as *Solinus* fabulously relates, but because they are more merry and jocund at home;

as the Cock is: whence it is that the *Loerian* Grasshoppers will not sing at *Rhegium*, nor theirs on the contrary near *Locris*; and yet there is but a small river runs between them, such a one as one may call a stone over. Much certainly doth their Countrey (which comprehends in it all the love that may be) move them: where like the people of the Jewes, they refuse to sing their native Songs in a strange Countrey; who being cast out of their own habitation, seek means to die rather than waies so live; so prodigal seem they of their short life, and desirous after their native dwelling.

They do so affect the company of men, that unless they see fields full of Mowers or harvest folk, and the waies with passengers, they sing very low and seldom, or silently and to themselves. But if once they hear the reapers making merry, talking and singing, (which is commonly at noon) then they sing so loud as if they strove who should sing louder, together with them, wherefore not undeservedly was the Palace in *Athens* called *tristis*, who being naturally obstemious by nature, yet was so full of talk, as if he strove that no body should be heard at the table but he. *Socrates* in his *Phaedrus* recites the History of the Grasshoppers very wittily, warning men not to sleep in the heat of the day, lest the Grasshoppers mock them: for the Poets report how their diligence was highly rewarded. For they say that the Grasshoppers before the Mules were, were men; who afterwards when the Mules came taught them to sing; but some of them were so delighted with musick and singing, that altogether neglecting their meat and drink unconsiderately, they perished; the which afterwards being turned into Grasshoppers, the Mules gave them that for a reward, that they should be able to live even in the heat of the day without meat or drink, neither to have any need of blood or moisture.

They couple and generate with creatures of the same kinde, as *Aristotle* tells us, and the male calls his seed into the female, which she accordingly receives; they bring forth in fallow grounds, lastion and Generation. hollowing it with that sharp picked hollow part of their tail, as the *Bruchus* doth, and therefore there is great plenty of Grasshoppers in the Countrey of *Cyrene*. Also in reeds, wherewith the vines are propped, they make hollow a place for their nest; and sometimes they breed in the stalk of the herb *Squilla*, but this brood soon falls to the ground.

This is also worth the notice, which *Hugo Salarinus* writing upon *Atinus* affirmeth, that the Grasshoppers dye with bringing forth, the ventricles of the female being rent asunder in the birth (the which some being very much deceived therein, do report of the Viper) the which I exceedingly marvel at: For they lay white eggs, and do not bring forth a living creature (as the field mouse doth) unless it be by reason of Weakness: of the eggs comes a little worm, of that comes a creature like to the *Annelia* of the Butterfly, which is called *Tetigomeria*, (at what time they are very delicate meat to be eaten before the shell be broken) afterwards about the Solstices, in the night come forth of that matrix, the Grasshoppers; all black, hard, and somewhat big. When they are thus got out, those that are for the quickers, betake themselves thither; those that live amongst the corn, go and sit upon that, at their departure they leave behind them a little kinde of moisture; not long after they are able to take wings, and they begin to sing. That therefore which *Salarinus* feigneth concerning the bursting of the womb of the mother, I should conceive to be understood of the matrixes.

A certain woman did bring up some young Grasshoppers, for her delight sake and to hear them sing; which became with young without the help of the male, if we may believe *Arif. l. 1. de hist. anim.* but since he hath told us that all the females of Grasshoppers are mute by nature, and this spontaneous impregnation is far from truth, either the woman deceived *Arifstotele*, or he us.

There is another kinde of Generation of Grasshoppers, that we read of. For if clay be not dug up in due time, it will breed Grasshoppers, so saith *Paracelsus*, and before him *Hesychius*. For this cause *Plato* saith Grasshoppers were of old time born of the earth, but by the favour of the Muses turned into that Musical sort of creatures, the Grasshoppers. Even at this day sustaining their lives with no other food than dew, and feeding themselves by continual singing they live. For this cause the *Athenians* were called *Tetigophori*, because they wore golden Grasshoppers for ornament in their hair, and for a token of their nobility and antiquity; as *Thucydides* l. 1. *Syngraph*, and *Heraclides Ponticus de prisca Atheniensibus testis*. *Erytheus* makes a proof of this custom, being born of the earth as they say, who first governed the Common-wealth of the *Athenians* and they too in the judgement of *Plato*, the Natives were *asthymoi*, i. e. born of the earth. Afterwards it came to be a custom that none but an *Athenian*, or one born in the place might wear a Grasshopper in his hair: of this opinion is *Arifstoph* as also his *Scholast*.

*Idoro* saith that the Cuckow-pizze doth generate Grasshoppers, which is not true, but that it produceth small Locusts is manifest. *Lucretius* in his 4. Book, saith that the Grasshopper in the Summer doth shift his skin, according to this verse:

*Cum veteres ponunt tunicas estate Cicadae;*

And for that reason he is called by *Hesychius*, *purphos tristis*, i. e. the naked Grasshoppers or without a skin: whom I should not have believed unless I had the picture of the skin so cast off by me.

Before Copulation the Males are of the more delicate taste, afterwards the females, for that they



they have in them white eggs very pleasant to the palat. The *Parthians*, as *Pliny* writeth, and the rest of the eastern Nations feed upon them; not only for nutrition sake, but to open their veins, and to stir up their languishing appetite, as *Athenus* in his 4. Book, and *Natalis Comes* exprely affirm. Hence *Aristophanes* in his *Anagnors* out of *Theocritus*, writes that the gods did feed upon Grasshoppers, at what time they had lost their appetite through choler or passion. I have seen, saith *Ælian* l. 12. c. 6. those that sold them tyed in bundles together for men to eat, to wit, the most voracious of all living creatures did sell them most jejune, lest any thing should be lacking to their exquisite dainties.

Their use in  
Physick.

*Dioscorides* gave rolled Grasshoppers to eat, and saith they are very good against the diseases of the bladder. Some, saith *Galen*, use dried Grasshoppers for the Colick; they give according to the number 3, 5, or 7 grains of Pepper, as well when it goes off as when it comes on. *Trallianus* bids to give them for the Stone, dried and beaten, the wings and feet first of all taken away, and this to be done in a bath with sweet Wine and Hippocras. *Ægineta* useth them dried for the Stone in the reins; and for the diseases of the reins he invented the composition called *Dianetigon*. Such another like Antidote doth *Myrsinus* prescribe, but all heads and feet as superfluous members being cast away. *Luminarius* hath transcribed an Electuary out of *Nicolaus* of this sort. Take Grasshoppers, their heads and legs, cast away. two ounces, Grommel seed, Saxifrage seed, each 1 ounce; Pepper, Galanga, Cinnamon, of each 2 drams, Lignum Aloes, half a dram; honey what is sufficient. *Nicolaus* useth Grasshoppers burned and powdered, mingled with honey, and gives them about the bigness of a bean in a quantity of wine. *Atius* gives three Grasshoppers beat in Wine. Some in stead of Cantharides use Grasshoppers to provoke urine, and in my judgement not without very good reason; for they are taken with lesse danger, and do work sooner, as well in this disease, as in the weakness of venery. *Nonus* the Physician prescribes an Antidote of Grasshoppers, and *Xenophyllus*, against the Stone in the kidneys. *Aretæus* for the remedies of the bladder, speaks thus of Grasshoppers; *The best remedy for the bladder, is a Grasshopper given in its time to eat* (Males before copulation, but afterwards Females, as we finde in *Aristotle*) but out of their time, dried and powdered; boyl them with water and a little spike: also let the patient sit in the fume for a bath to ease the pains of the bladder. Some of our later practitioners, put Grasshoppers in oyl, and set them in the Sun, and mingle them with oyl of Scorpions, and anoint the privities of men and women, the testicles and parts about with it for pains of the bladder. *Arnoldus Breviar.* l. 1. c. 20. & 32. commends the powder of Grasshoppers for the Colick, and Black passion, and also to drive forth the Stone; if half a Grasshopper in powder be drank with Goats blood, or Diuretick wine. *Laframus* highly esteems the ashes of Grasshoppers to break the Stone, taken with Radish water, or the decoction of chich Pease. Also they cause idle and lazy boyes to hunt after them: *Theocritus* speaks thus of it in his first *Iaylim*.

Here with thin ears of corn bound to a cane did make  
A whip for Grasshoppers to hunt and take.

Neither are they only excellent meat, and very usefull in Physick to men, but they feed Birds also, and inshare them. For the youth of *Crete* (as *Belonius* witnesseth) hide a hook in the body of a Grasshopper, and when they have fastned it to a line, they cast it up into the air; which the Merops seeing, catch it and swalloweth, which when the boyes perceive they draw it to them; and so do exercise their air-fowling not without profit and pleasure.

The Grasshoppers abounding in the end of the Springs do foretel a sickly year to come, not that they are the cause of putrefaction in themselves, but only shew plenty of purid matter to be, when there is such store of them appear. Oftentimes their coming and finging doth pretend the happy state of things: so *Theocritus*, & *Virgils* useth *hædonia*. *Niphon* saith that what year but few of them are to be seen, they prestige dearth of victuals, and scarcity of all things else. But whereas *Jo. Langius* (a Philosopher of great reading and learnings, and a famous Physician) saith lib. 2. epist. that Grasshoppers did eat the corn in Germany as the Locusts do; *Stemius*, that it was done in *Helvetia*: *Lycosthenes* lib. prodig. and the Greek Epigram doth affirm, that they eat the fruits and crop the herbs, truly (unless they mean a Locust in stead of a Grasshopper) they declare a strange thing, and (saying the credit of so famous men) I will not believe, for they have neither teeth nor excrement as hath been said, but only feed and swell with the dew. Besides, although I have gone over all *Helvetia*, Germany and England, and have searcht for a Grasshopper as for a needle, yet could I finde none. And therefore I suppose that both they themselves, as also *Gnill*, de Conchy, and *Alberti Vincentius*, to have mistaken the Locust or *Bruchus* for the Grasshopper, being deceived by the common error, who take the one for the other. They that desire more of their nature and use, may consult the Authors of the Greek and Latine Epigrams, with praising them or dispraising them according to their own humour.

The *Ægyptians* by a Grasshopper painted, understood a Priest and an holy man; the later makers of Hieroglyphicks, sometimes will have them to signifie Musicians, sometimes preachers or talkative companions, but very fondly. How ever the matter be, the Grasshopper hath sung very well of her self in my judgement in this following Distich:

Sim

Sim sicut insecti genus exiguum atq; minutum  
Magna tamen parvis gratia rebus inst.

Although I am an Insect very small,  
Yet with great vertue am endow'd withall.

Next in order followeth the *Gryllus* or *Kricket*, both for that it resembleth somewhat in the name of shape, the wings excepted, but comes very near it in its note and manner of finging. *Cale* the *Kricket*, *pliny* saith it is called in Greek *γρύλλος*, but cleeth not his author, neither can he. Others from the shrill found think it to be so called, like the noise of the dashing of waves, which is called *Gryllus*, in the number of whom is *Isidore*. *Bludrianus Papius* collecteth it from the harshness of the sound *γρύλλος* but not rightly; whereas I have proved out of *Driff*, that to be a greater sort of Locusts: *Frutigeri quest. lib.* from *Pliny*, calleth it *Trysalis*; the which notwithstanding it be an Insect without wings as the other is, yet it is not at all like to the *Gryllus* in form or shape. It is called also in Latine *Gryllus*; in French, *un Gryllon*, *Cryllon*; in Arabic, *Saafir*, if we may believe *Belonius*; in Barbary, *Urad*; of *Avien*, *Algidied*; of the Polonians, *Smier*; Hungarians, *Oziferes*; in Germany, *der Grikken Hym*; about Argentum (from the moneth wherein it sings) *Bruch vogle*; of the Whytians, *Smieria*, *Czenczick*; of the Italian and Spaniard, *Grallo*; of the English, *a Kricket*; of the Dutch, *Croket*, *Nachtcröket*.

The *Gryllus* or *Kricket* is of two sorts, the field *Kricket*, and the house *Kricket*. *Pliny* refers them both to the kindes of black Beetles, but improperly, since they have not their wings in a cover, but only thin membranes; though the oormolt are far thicker than those that lie hid under them. *Calepino*, that came after him, makes it a kinde of Locust, but his error is the same. *Niphon* on *Aristotle*, lib. 5. 28. & 29. calls them ground Locusts and *Bruchus*, as also

*Albertus* by ignorance calls them Grasshoppers. Of the field *Kricket*s, some are males, some are females: the male is weighty as big as the Grasshopper, but the body somewhat longer, of a blackish colour, the head for the bulk of the body, big; the eyes great, standing out, the fore-head homed, but the homes without joints, which notwithstanding are moved to and fro with ease. It hath six feet coloured like the body, the hindmost longer than the rest, for the more nimbleness of motion and leaping; they go (as all the rest of the *Kricket*s do) forward and backward; the wings as it were slightly engraven, and crooked, covering almost all the body; the tail forked, the body less than that of the female; she having a bigger belly, is of an unsightly green colour; the eyes grass-colour, the cornicles reddish, the tail three forked like a Tridents; in bulk of body differing from the male. In the Summer they are found in the fields, making holes in the earth, and building their nests. In a calm Winter they lie hid, in a cold and sharp they die in their holes, the which they seem to have digged without the help of a Pioneer.

The noise which they make is caused by the rubbing of their wings one against the other, as *Pliny* witnesseth. *Jacob Garret* an industrious and ingenious Apothecary did the same with the wings pluckt off and rubbed together, very cunningly imitating them: inso much that I wonder at *Scaliger*, who saith it cometh from a kinde of I know not what follicle and pipe placed in the hollow part of the belly; and at *Sabinus* who ascribeth it to the collision or grating together of their teeth: the which *Pliny* also, but falsely, writeth of the Locusts. When as either of them through the narrowness of the passages of their holes do lightly rub their wings, whether field *Kricket* or domestic, they make but a small sound: but when they are out of doors and rub hard, they make a very shrill loud noise, yet not at all without the motion and agitation of their wings: the which if you crop or pull off, you shall see all that noise presently to cease. In the heat of the day (in which they are much delighted) and in the night also they sing before their holes mouth. Their common abode is in pastures and meadows; they do not willingly tarry in shady and obscure places, they seldom live till winter, as *George Agricola* writeth.

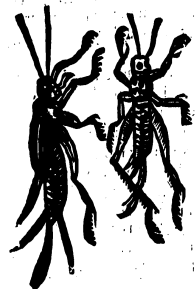
*Nigidius* gives great credit to them, but the Magicians more; because they go backward and make a noise in the night, and make holes in the earth. The farther off they are, they make the shriller noise; whereas being near at hand they are silent, and through fear or suspicion presently beake themselves to their holes. The *Kricket*, (saith *Albertus* l. 4. c. 7. exercit. 273.) if it be divided in the middle, or have the head taken off, yet sings and lives a great while after. The which if it be true, what shall become of that pipe in the belly of them, which *Scaliger* saith doth cause the sound? The children use to hunt them with a Pismire tyed about the middle

with

with a hair, which they put into their hole, blowing away first of all the dust left the should hide her self again, and so is drawn out by the Pismire. *Plin. l. 29. c. ult.* But sooner and with less labour is the taken thus, take a long small twig or a straw, and put it into the holes, and draw it out by little and little, out she comes presently to her holes mouth; as it were to ask what the matter is, or who offered that injury to her hole; and so is taken. From whence cometh the Proverb; *Stultior Gryllo, more siliu than the Kricker*; of him that for every light cause doth betray himself to his enemy, and wittingly brings himself into danger. They live upon new Panick, ripe Wheat and Apples.

The house Kricker (if we may believe *Albertus*) is called of the Greeks *μυρμηκ*, but no such name can be found. It may be he took a barbarous word for a Greek: the English call them *huse Krickets*; the Germans, *Heimgyl*.

*Pliny l. 11. c. 128.* writing of the Scarabee (among which he fallily reckons the Kricker) hath these words: Some of them dig holes in the ground, others of them in the dry earth between the fire and the oven, making a great noise in the night. The Dometick like the former are both male and female. The male is almost all over of a dunnish colour, the back of a various dun, or rather black; the body long and much less than the field Kricker; the head almost round, the eyes black, the comicles movable every way, in form and shape all alike the field Kricker; about the root of the middle feet two frow white lines do cross the back and adorn it.



In the months of *July* and *August* they fly, but not far nor long; and that like the Wood-pecker, or Hickway, with a waving flight, sometimes flying aloft with her wings spread abroad, sometimes descending with her wings close to her body: the tail is forked. The female is the bigger and longer bellied, she flyeth with four wings, of which the outermost are shorter, the innermost narrower and longer; the end of the tail hath three prickles or bristles. Both the sexes fly, and leap and run, and that swiftly, they flick in greedily the sum of broth, and barn of ale or beer; they feed likewise on the matter and liquor that cometh out of corrupted flesh or carrion. Of this Insect writeth *Albertus* thus: The Gryllus or Kricker which sings in the night, seems to have no mouth as the field Krickers have, but there is found in his head a long thing like a tongue, and it grows above the outer part of the head, and that part is not cloyed, as the mouths of other creatures; neither is there found in the belly any superfluity at all, although it feed on the moisture of flesh and fat of broth, to which either poured out or reserved it runs in the night; yea although it feed on bread, yet is the belly alwaies lank and void of superfluity.

The Kricker doth not only recreate men weary with labour, with their singing, but are good for physick also to drive away diseases. The Ancients (as *Scaliger* hath observed *Exercit. 186.* and found it by his own experience to be true) did use them in stead of the Cantharides and with the like success. It being dug out of the earth with it, is good for the running of the like success. Being rubbed between the hands it cureth the disease called *St. Anthoiius fire*, as also the swelling of the jawes: but this Kricker must be digged out together with its earth with iron, and afterwards be rubbed; and so the patient will not only be cured for the present, but shall be free for a year from having the disease again. *Plin. l. 30. 49. 12.* They cure also the *Pavida* i.e. an Impostume or sore coming of matter distilled from the head into the kernels of the ears; whether they be bound upon the place, or the place anointed therewith; they serve also together with their earth, to anoint the Kings-Evill. Their ashes mixt with oyl, bring old ulcers to Cicatrice. The Kricker distilled in water is good against the Stone or difficulty of urine. *Bellonius* used to drop the oyl of them into the ears of them that are diseased in that part; by that means taking away all the colour and pulsation of them. *Marcellus* much commends the stroking of them upon the tumours of the jawes; and binding them upon the same: and in the opinion of *Haly* being hung about the neck, they cure the Quartan Ague. *Serenus* saith they cure the swelling of the Tonils in this Distich:

*A Kricker with right hand on Tonils press,  
To kill the Krickers, gives the patient rest.*

Children (as the *Italians* do Grasshoppers) do keep them in a box bored full of holes, or bags, to hear them sing in the night, giving them leaves of herbs whereon to feed, and to keep them all the Summer. They are kept in *Africk* in iron cages, and are sold at a great rate, as I have heard by some Merchants, to cause sleep. For those of the inhabitants of *Fesse* are exceedingly deheard by the light of their shrill noise; as much as the *Irish* and *Welsh* with the found of the Harp. With which also learned *Scaliger* seems to be not a little affected, when for their musick sake he kept them inclosed in a box, and the which if he had kept in such a thing where they might have had aise he had not found dead after three daies; but able to live a long while: *lib. de plant.* For being excluded from the air they cannot live, which besides air and found have nothing in them, nor seem

The Ule.

to be any thing else. The last Summer I had a male and a female of them; but within eight daies, I found the sides of the female eaten out by the male, which also it self two daies after expired.

The Bird *Lanio*, as the learned *Brewer* hath observed, is fed with them. The which she fastens upon thorns near to her nest of young, for fear they should want food. When they become offensive by reason of their number, thus they may be driven away or taken off. Take a good deep dish filled of water, and place it before their holes mouth with a good deal of oatmeal round about it; so the Krickers leaping up into the bowl are drowned; or if you mix water with Vitriol and inject it into their hole, they will be gone.

There is one little winged creature behind, which whether it may be referred to the Classis of Grasshoppers or Locuts I know not. For by that it flies in swarms, and eats the corn, it may seem to be a Locut; but in figure and shape it is likest the Grasshopper above any thing. The wing of this creature is wonderful resembling an Infants; it hath on the head a three cornered cap, in the top of which are four black foots; two often very long, the other two almost round, between which you may perceive two very little points or prickles; it hath four wings, of which the innermost are folded double when it sits still that you would think it to have six wings. And these it may be were those Locuts of which *Cassianus* hath written out of *Sigebertus*. In the month of *August* (saith he) in the year 874, a wonderful swarm of Locuts having six wings, and six feet, did fly out of the East, by which almost all *France* was destroyed. You would say at first sight they had a hood upon their shoulders; but if you look nearer hand, it is nothing but the upper part of the wings inclosed with a semicircle. The body very thick, of a black and dun colour, the hinder part of the wings were all full of black spots. *P. Quicquibergius* of the City of *Antwerp*, sent over this to *Pennins* out of *Africk*, the which I keep to this day in my store-house of Insects, by the name of a young Grasshopper. And as little am I satisfied concerning the *Tryxalis* (spoken of before) it had its name it may be from gnawing or eating. But that it should be either the Bruchus, or the little Herb-locut, Grasshopper, or Kricker, I cannot be induced to believe. Not only because *Athenaus*, *Pliny*, and other Philosophers are not agreed in that very point; but besides, because they do much differ in form and nature: and why I pray may not *Tryxalis* be derived from *τρυκα*, to make a noise? and if it be, truly it will best agree with the Krickers, which because of the noise it makes, it may be as true of the Cricker, which *Pencer* very well distinguisheth from the Blatta or Beetle, as by other things, so by the noise it makes: that which *Joach. Camerarius* son of that great *Camerarius* and heir of his virtues, first observed, *Pliny* adviseth to roist 20 of them and to drink them with sweet wine against shortness of breath, and spitting of blood. The ashes of them in honey applied to the rugged edges of ulcers takes them down; they are likewise exceeding good for the stopping of womens courses or monthly purgations.



Hitherto I thought good also to refer the water Grasshopper of *Rons doletinus*, whose head is like a pentangle, having as it were five corners, the eyes round and standing out of the head, not great, but black; the comicles very short, coming forth out of the outermost part of the mouth; on each side it hath three feet, the hindermost longer than the rest; on the back it hath little wings, or some coming; the tail forked, the belly oftentimes as it were cleft; the colour of the body somewhat dun, or rather black and white. I found them in muddy and standing waters, but the nature of it I yet know not. This differs from the land Grasshopper, both for that the head stands out more; and it seems to have some kind of neck, and also it hath wings not fit for flight, but only to lift it self up. This is said to make a kind of a pleasant noise like the land Grasshopper, upon the

leaves of the water Lilly, pond-weed, and other water herbs. The which I have not as yet heard.

## CHAP. XVIII.

### Of Moths called Blatta.

MOST men talk much of the *Blatta*, but few or none able to describe what the *Blatta*, properly so called, are, neither do they give the least mark whereby they may be known; but gathering divers notions here and there do put them all together and confounding them. And but that *Pliny* had brought some light to this History, the *Blatta* had altogether been omitted or lost. First of all therefore we shall shew to what Insects the name of *Blatta* was given according to Authors, then we shall set down what the true *Blatta* and properly so called is. Now under the name of *Blatta* are comprehended both the worms growing in the ear, as also those *Phalang*

which trouble the Hives of Bees. But since these desire the light, the other altogether shun it, why they should be accounted Phleas; I do not see. The Blatta also is a little worm eating clothes or books. So *Horace* in his *Sermons*, *Blattarum & sclarum epula &c.* But *Maridal* altogether distinguisheth between the *Blatta* and the *Tinea*, and sheweth them to be creatures of several kinds.

It is taken also of the Moderns for the little worm called *ph*, out of whose web silken garments are made. Some call the little worm that groweth in the grain in the low oaks, *Blatta*, from whence cometh the Blattean colour, or grain colour. So *Turneb.* *advers.* l. 18. c. 17. & l. 28. c. 23. The Blattean colour is died with a most curious colour, not black, as some think, but a bright purple or scarlet. To which the Book of *natura rerum*, & *Gualter de Conchis* do assent. The worms of the belly some call *Blatta*. *Cardanus* in one place calleth the worms that breed in meal or bran, *Blatta*. *Gaza* interprets the word *vesicula*, as also *vesumelut*, *Blatta*. But the proper and right name thereof is *phaga*; according to *Pollux*, *phaga*; as also according to *Lucian*, deiding a man that was no Scholar, yet bought many books. The Italians call it *Blatta*, and *Tarma*; the French *Piattella*; the Germans, *Wibell*, *Brattworme*, *Brattkerfer*; *Malkesfer*, *Springwibell*; they of Norimberg call one species of them by way of sport, *Schavahen*, because it cannot endure cold, as *Cordus* writeth; the Illyrians, *Swinie*; the Polonians, *Malulowy*; the Hungarians, *Moly*; the Spaniards, *Ropa cova patilla*. Now the *Blatta* is an Insect flying in the night, like to a Beetle, but wanteth the sheath wings.

There are three sorts of *Blatta*; the soft Moth, the mill Moth, and the unfavoury or stinking Moth. *Fraxinus* divides them altogether fallily, confounding the soft and the stinking Moths one with the other, and making the *apomelut* to be the third species of them, seduced as it seemeth by *Gaza*'s interpretation. That all of them when they are old do shift their skin; both *Arist.*

*hyst.* 8. c. 17. and *Pliny* l. 11. c. 27. do affirm. All the males are supposed to have wings, but the females certainly have none; they also are less, those more bulky and big-bellied. All of them (but the stinking) run very swiftly, and die with cold. The male is soft, the female of colour more black; it hath a small head, whereout come two long cornicles, every waies movable; the breast, together with the shoulders orbicular; in the body it hath seven incutures; the wings are of the same colour with the body, it seldom flies, but (as the Ostrich doth) by help of the wings it doth run very swiftly; it hath a forked tail like a pair of Barbours cizzers; it hath six feet. It lives about Privies or Jakes houses, ditches and steamy foggy places, for the most part they are somewhat like the field Cricket, but of a more compact body, and with far more slender thanks.

In the Ship called the *Philip*, (which that noble other Neptune, Sir *Francis Drake* took laden with spices) there was found a wonderful company of winged Moths, but somewhat bigger than ours, softer and of a more swarthy colour, I have heard by many men of good credit, that there was one of these soft Moths found and taken in the top of the roof of the Church at *Peterborough*, six times greater than the common Moth, which did not only pierce the skin of those that sought to catch it; but bit so deeply that it did fetch blood in great quantity; it was about a great thumb breadth in bigness and length, and being shut in between two wals, yet after two or three daies got forth no man knew how.

The Mill or Bake-house Moth, I have seen: the Greeks call the female (if I am not deceived, because it had no wings) *μυαυις*, *μυαυις*, *μυαυις* & *αβλονιαν*: it is longer, thicker, and of a more shining black colour than the ordinary soft Moth, with a little forked mouth placed as it were under its belly; the cornicles like to the first, little hollow eyes; or rather eye-holes, the breast four-square, with the four foremoist feet fitted to it, the hindmoist to the belly; above the shoulders appear as it were little wings, though they are not so indeed; the rest of the body somewhat thick, cut all over round about circle or orbicular wise; in the sides resembling the form of a saw, the tip of the tail and a fork growing on each side is somewhat like a Trident: these Moth Crickets take up their abode in warm places, as stoves and bake-houses, and suchlike; let them be never so hungry, they will scarce indure to come into the light; or if they be compelled so to do whereby to get some food, they betake themselves into the dark again with what speed they can, or else hide themselves in dust that they may not be found.

The third sort is so unfavoury, and carries with it such a stinking smell, that from the same it is called of the Greeks *αβλον*, *αβλον*; of the Latines, *Fetida Blatta*; i. e. the stinking



stinking Moth; it hath thighs sharp with prickles, as *Pliny* describeth it, the which mark of distinction, if he had not expressed, perhaps this kind of Cricket had not been known, or seen by me. For the black Beetles (especially the hairy ones) they are altogether of the same form, only the tail taken off. It is of a pure black glistering colour, very slow paced, as no creature the like; the body so framed and ordered, that you would swear it were winged and had sheath wings, nevertheless none of them have any wings, no not the male it self amongst this sort of them, (what ever *Pliny* dreameth to the contrary) it hath thin slender long thanks; remains in deep cellars, and is a retainer to the Jakes; it creeps very slowly, but at the least glimpse of light, and whisper of talk, she hides her self; a shamefast creature certainly, and most impatient of light, not so much for its ill favouredness, but the guiltiness of its confidence in regard of the stink it leaves behind it, and of its ill behaviour: for it frequents base places, and digs through other mens wals, and doth not only annoy those that stand near it, but offends all the place thereabouts with its filthy savour. The mouth of it is forked, the back covered (as it were) with a sheath wing, so solitary a creature that you shall scarce finde two of them together. Whether it be begotten of putrefaction, or otherwise generated by the commixture of male and female, is not certainly known.

About *Francford* near the River *Main* they are frequently seen, as also in *London* in Wine-cellar, and dark dungeons; the other species are more frequent in Bake-houses, and warm places. The stinking Beetle some confound with the *Cimex* or *Walt-louse*, a creature of the like quality; but not rightly. The inhabitants of *Pern* have certain creatures which they call *Arane*; *Serius* thinks them to be Butterflies. They are of the bigness of the Cricket, they go forth a great many of them together in the night time, and all that is in the house almost that is soft they nibble about and eat it. *Lib. Navis*. Butterflies I cannot say they are, because they gnaw, and do not suck with their Promucis; I would therefore either make them to be Crickets, or some new kind of Moth, or some creature mixt and made of both. In an Epistle of a certain learned man sent to *Gesper*, there is a description of another kind of stinking Moth. There is faith he a certain stinking flying Insect in *Hungary* that stinks beyond measure; I should call it a stinking Grasshopper, but that it is more like the Cricket. In Winter it desires the light, in Summer it shuns it, when it flies it makes a kind of a terrible horrid noise, leaving a most noisome stink behind it. Some there are when the air is infected, carry this creature about them as some secret remedy, and adore it; nay some of them, which a hog would scarce do, will swallow them, so afraid are they of the Plague, and so desirous to life means against it. They are bred in wals: where they are most frequent there grow as they say the most generous wines, & I have found it to be true by experience. So far *Epistle*.

All the younger Moths are whitish, but at their full growth of a bright red or tawny. The stinking are as black as a coal. Divers Authors do speak of four other sorts of Moths, viz. the Venerale, bred in the genitals of men; the Bee Moth, the Cloth Moth, and the Library or Book Moth, from eating of the Books; but none of these, but the Bee Moth agreeth with the description of the Moth: but that neither is so stinking as the one called *Arane*, or so soft as the others before described; but of a middle nature, rather pouldred with meal than anointed with oyl. Of the rest of these we shall speak more fully when we come to speak, God willing, of the Lice and Moths called *Tinea*.

Much variety of opinion there is among the learned of the colour of the Blat Moth, or the Blattean colour. For if these Insects (of which we have now treated) are the Blatta truly so called, why should not the black be the Blat colour, rather than red purple colours? Certain it is, that the *Bizantine* Blatta yelds a purple colour, as that of the worm *Cochineal* doth a red or scarlet; either therefore all colours may be called Blattean, or else this last of ours is not one. Indeed I wonder at the boldness of *Turnebus* and *Thyestes*, which will have that of the worms to be the Blattean, when as they are of no Author called Blatta; but rather properly it ought to be counted a Scarlet red. The Blattean colour therefore, to say the truth, is the Purple, notwithstanding our Blatta send forth no such kind of liquor; but are fliers of the light, natty, cruel, rough, cheeving, living of nocturnal depredations after an infamous manner, whence *Servius* calls them *Piratas noctu navigantes*, night Pirates.

These little creatures, although they are hateful to nature it self, to Men and Bees, yet God their use hath endued them with sundry vertues, in which they excell the Blatta *Bizantine*. For take off his shell or nail, which is there between its head (called *papaver*) and its neck, what doth the belly contain but the ornament to dye withall, and to delight the eyes with their colour? And be it so that Princes and great men will buy it though never so dear, and by the greatness of the price make it only fit for Kings to wear; yet notwithstanding when you have heard the virtue of these Blatts, otherwise so contemptible, you will say they are far more to be esteemed than purple. For they are wonderful good for the pains in the ears, taken after this manner: Take twelve Blatts with their wings cropt off, of old wine and honey ana  $\frac{3}{4}$  j. and half the rind of a Pomegranate, of the juice of an Apple 6 spoonfulls, boyl them well in a new pipkin till the rind of the Pomegranate be made limber and soft; then beat them all together, which done, add unguentum Syriacum  $\frac{3}{4}$  j. of Tarre  $\frac{3}{4}$  j. the juice of 4 Onions pressed out what may suffice; beat all these together and lay them by for use; let this decoction be dropt into the ears, and a lock of



The Uſe.

Although theſe Inſects are ſuch as hath been ſaid, that they ſet with their acrimony; that ſtretching them enflame, and with their poiſonous inflammation cauſe excreme thinne, and a horrible ſwelling; inſomuch that the very ſkin is burſt; yet hath Dame Nature made them notwithstanding very wholeſome, which Art afterwards hath prepared for medicines, before they be put in uſe. *Plinius* and *Agineta* diſpute whether they ſhould not be prepared as the Cantharides, *Diſcorides* dries them in a ſieve over hot embers, and ſo layeth them by. *Galen* ſleeps them in vinegar, *Hippocrates* commands to take off their wings and feet. And becauſe they ſet, exulcerate, inflame and ſwell up, and do ſtrongly attract and heat the parts ſo ſtretched, *Diſc. l. 2. c. 59.* ſaith, that being mixt adively with ſetting ingredients, they may be applied to the Leprouſe, Cancer, and wilde Tetterſ. My opinion is, that they may be uſed in ſtead of the bigger ſort of Cantharides, rather than ſome kinde of Blatts (by *Paulus* his leave, if I may ſay ſo) not only becauſe they are ſomewhat like in ſhape and figure, and in virtue alſo, as *Galen* writeth, *Pliny* ſaith that the Bupreſtis by way of corroſive doth take away Ringworms in the face, *Hippocrates* doth much commend them in divers diſeaſes of the womb. For ſo he writeth in his Book of the Nature of Women; and in his Book of the Diſeaſes of Women; and in his Book of Barrenneſſe. For the hardneſſe of the womb, to emollient juices and fat add a Bupreſtis, and uſe it. To drive out the Monthly Flowers and ſecondines, prepare half the body of a Bupreſtis (whether great or ſmal) with twice as much pulp of a Fig, and apply it; for it purgeth the womb, and inflateth it, and is a ſpecial remedy to procure the Flowers when they are paſt hope. Sometimes he applies only a Bupreſtis (if it be a great one) ſometimes making a ſoft peſſary, he takes ten, and adds to them a little ſawcer of oyl, and mingles with it Wine, *Æthiopian* Cummin, *Seſeli*, and Annieed, of each alike parts, and whileſt they are hot he makes a peſſary of them and ſeteth them to the Matrix. In the intrangling of the womb, when the fit is over, the body firſt purged, *Hippocrates* makes a Medicament with a Bupreſtis, and thruſts it into the Matrix. Alſo for a Schirrous of the womb he uſeth a Bupreſtis, but warily and with diligent conſideration; for he puts it in like a Suppoſitory for one day, and when it doth much vex the patient by corroding, he bids to take it forth: more over he compounds a Bupreſtis, Myrrhe, and Elaterium, and puts it in. So he doth alſo to bring forth a Mola, *Gal. l. 1. c. 10. cap. 1.* out of *Archigenes*, deſcribes a Medicament of Bupreſtes, with Vinegar, Crowfoot, and Wakerobin roots, againſt falling of the hair, Leprouſe, Elephantiaſis, &c. the cure whereof you may eaſily finde there.

The ſigns of a Bupreſtis being drank.

Now as I have declared hitherto its profitable qualities, ſo (left I ſhould tranſgreſſe the bounds of hiſtory) I ſhall open the terrible effects that this poiſonous creature cauſeth in man and beaſt; if a man ſwallow a Bupreſtis, 'tis all one as if it had been a Cantharides: the body ſwelleth, as if it had a tympany, much wind creeps between the ſkin and fleſh, which happeneth no doubt by the flux of humours melted by the poiſon, and the vapours elevated upwards. The lips are of a ſtrong colour, to wit, of a dead violet. In the mouth there is the like poiſonous tale; the ſtomach, belly, and guts do ake extremely, the urine is ſtopt, the body is ſill all over, as alſo the head and brain are ſenſible of it.

The Remedy.

A remedy of this is Salt-peter, taken in Wine and Oxe gall. Uſeful to that purpoſe is womans milk, ſuckt out abundantly, and in deſect, cowes, goats, or ſheeps milk. Womans wine drinck, and vomited up again; but before a vomit they ought not be given, becauſe by that means the Feaver would be more ſharp. *Diſcor.* Firſt of all therefore of good ſtore of Wine ſodden, or with oyl of Myrtle Bacon lard, or fat Pork broth, or with good ſtore oyl of Olive, or boyled Wine a Vomit is to be made. New Wine drank freely, is held to be a ſpecial remedy againſt the Bupreſtis. *Galen* and *Ardeynus*. *Pliny* commends Nitre with water, or Laſerwort, *Aſa dulcis*, Wine and Honey, or Bezoin diſſolved in warm water; or take red Nitre 4. drams, and in warm water or Polca cauſe Vomit. After vomit there muſt be means uſed for purgation, afterwards uſe dry Figs (as *Galen* preſcribeth) or a decoction of them in old generoſe Wine when the fit begins to bare. The Thebane date is preſcribed to eat alone, or bruſed in ſweet Wine or womans Milk: all kinde of Pears, and oyl of bloſſomes of Apples, are much recommended for this uſe. *Nicander* commends wood-pears, (for that I think he means by *æxmodis*), and eſpecially Myrtle berries) following the authority of *Diſcorides*. For that they do reſtificate and bind, and by that means do aſſuage the hot nature of the Bupreſtis, and help the weakneſſe of the ſtomach. But heed muſt be taken they be not eaten while the body is yet ſwollen, leſt the diſeaſe be increaſed by the poiſon being kept in. Some with good reaſon give 31. berries of bladder Nightshade, and with Almonds the make Almond-milk, together with the decoction of Lettice, Violets, Borage, Bugloſs, garden Nightshade, Plantain, Raiſins, and the great cold Seeds. *Actius* gives the root of Scorpion-graſs in ſweet Wine to drink. Many extoll the wings and feet of the Cantharides for an Antidote againſt the Bupreſtis, but either it hath an oppoſite quality by antipathy, which makes good that opinion, or elſe we may ſuſpect it to be falſe.

L. 2. 8. C. 10. n. 1.

If an Horſe or an Oxe eat one of theſe flies, preſently he ſwells, growes mad, and ſhortly after burleth and dieth. So *Ælian*, 6. de Anim. c. 35. and *Hierocles* a Greek writer writeth ſo. He bids to binde the horſes head, and to open the veins about his noſtrils, that the blood may run forth of his mouth, and to rub it with Coleworts, and give him Fiſh-pickle and Oyl: and *Vegetius* likewiſe almoſt in the ſame words; If a Horſe or an Oxe eat a Bupreſtis with the graſs, his belly will inſtantly ſwell, he is inflatd all over, he reſuſeth his meat, and he often and by little and little ſends forth his dung,

To

To cure this, *Abſyrus* and *Vigenius* preſcribe one and the ſame remedy: preſently get upon the Horſe and cauſe him to gallop as faſt as he is able, afterwards let him bloud a little in the roof of his mouth, and let him ſwallow the bloud as it runs forth, chewing it in his mouth; then keep him continually walking; let his diet be wheat ſteeped in ſweet Wine with Leeks given him with a horn in Wine warm well beaten with Raiſins. Some, as *Praxandrus* taught them, pour Oyl into the noſtrils of the Oxe, l. 17. c. 17. To Goats that are ſwollen with the Bupreſtis, apply Bacon-lard, or pour the fat broth of it down their throat, ſaith the ſame Author.

The Cynopreſtis ſeems to be the ſame with the Bupreſtis, for that works the ſame effects in Dogs as this doth in Catel: or if it be a different ſort of creature from this, I confeſs ingenuouly I have not met with it.

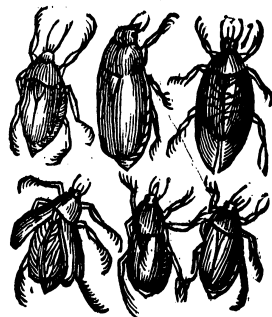
## CHAP. XX.

## Of the Cantharides, or Spaniſh Fly.

I know not what the reaſon was that the Cantharides above the reſt ſo well known, of ſo great uſe in Phyſick were omitted by *Pennius* and *Geſner*. Which task notwithstanding I ſhall willingly undertake, and thus I begin their Hiſtory. The word *cantharis* in Greek is the ſame in Latine; in French, it is *Cantharis*; in Italian, *Catavella*; in Spaniſh, *Cubillo*; in the German Tongue, *Grunne*, *Keſer*, *Goldkeſer*; in Low Dutch, *Spanſche*, *Ulieghe*; in Engliſh, *Cantharides* or *Spaniſh Fly*.



Of the Cantharides two ſorts have come to our knowledge, the one greater, the other leſſe. Of the greater ſort there are ſome thick and long, taken in wheat; and fat likewiſe as the Blatts are, drawn with variety of golden lines, which in the wings run athwart, and thoſe are accounted of the beſt uſe in Phyſick. Others are leſſe and lean, hairy, called the innermoſt, not ſo fit for medicine. Of the greater ſort alſo not all are of a glittering green, but ſome of them of a ſad red, but all of them of an inexpressible ſplendor, and very pleaſant to the eye.



The ſmaller Cantharides *Thomas Decat* firſt of all acquainted me withall, they ſeem to differ a little in ſhape and bigneſs; but have all the ſame virtue and original. Of theſe leſſer, the firſt hath a long forked head, with black eyes ſtanding out, the comicles long and black, the wings coming forth of the middle of the loins; the which are marked with two ſilver coloured ſpots, and a few other white ſpecks. They are commonly found in Kexes, or Aſſe Partly in the ſummer time. It hath ſeet and thighs very ſlender and long; of colour vermilion inclining toward a purple. The ſecond is of the ſame colour with the firſt, but only that the eyes and comicles ſeem to be green. Of the third the head and ſhoulders are not to be diſtinguiſhed, of a ruſty colour, and the eyes as black as pitch; the wings of like colour with the head, but glittering with golden ſtreaks, the ſeet black and ſhort. The fourth is like the third, but only it is rather in colour of graſs green, not ruſty as the other: otherwiſe, except the bigneſs (for it is the leaſt of all) it doth not differ. As well the greater as the leſſer of theſe Cantharides, do not come off living creatures, but of dry and moiſt putrefaction. The race of Cantharides is bred in wheat and corn fields, and in fig-trees alſo. *Thalernus* ſays in his *ſylva ſylva* that he ſaw them on the ſides of the trees.



*Arif*, in his 9. Book and 39. Chapt. They are bred alſo of the ſponge of a Roſe called *dens Carmineus*, and of the Caterpillars which are found in Fig trees, Poplar, Pear tree, Aſh, Olive, Roſe trees; for in all theſe there are worms bred that are the originals of Cantharides, but in the white Roſe they are leſs effectual. The Cantharides couple and generate likewiſe, but uſe a creature of their own ſpecies, but a worm only; they feed upon pulſe and grain, but eſpecially of wheat, and thoſe which are ſo fed are accounted moſt fit for Medicine: they ſmell like Tarre, taſte like Cedar, as *Nicander* reporteth.

Their virtue conſiſts in burning the body, cauſing a cruſt, or (as *Diſcorides* will have it) to corrode, cauſe exulceration, and provoke heat; and for that reaſon are uſed mingled with medicines that are to heat the Leptry, Tetters, and Cancerous ſores.

And in being mixt with Cecots or ſoft plaiſters, they do cure deformities of the nails, cauſing them to fall off. They are uſed in medicines for Corns on the ſeet or hands,

Some



Some appointe places where the hair falls off, with Cantharides bruised and liquid Pitch, the skin being spread with Nitre: they are good for Gouty, but are much to be had that they do not moderate or sleep, then some command to anoint those places made with the heads of the gall or dung of Mice mixt with Hellebore and Pepper. Cantharides mixt with quick Limon, pure Borax, as if you should cut them off with a razor. Some use to stuff a little of them into Medicaments to provoke urine. But there is a great question of it, because they are so poysonous, in respect of the bladder that they stir up with the poysonous Urine. But there is no question, but in Symptom they may do good with the Juice of wilde Vines, or with Sheeps or Goats Urine. Some of my Masters put only their wings and their feet into Medicaments that provoke urine. We faith *Galen* are wont to cast in the Cantharides whole, and we judge those to be the best, that are found in wheat, and have a yellow girdle running athwart their wings to adorn them. *Lib. 3. c. 1. 11. de Simp. fac.* also put under, they mightily provoke the Urine, and put to medicaments for the Dropsie, they are a very good Antidote against it; as not only *Hippocrates*, and *Diocorides*, but *Galen*, *Avicenna*, *Rhazes*, *Pliny*, and the best writers do testifie amongst Physicians. I cannot here praise sufficiently the excellent use of them, with Leven, Salt, and Gum Ammoniac, to divert Catarrhes, to cure the Gout in the feet and hips; by drawing the matter that lies deep, from the centre to the superficies. Also they are good against the venome of the Salamander, as *Pliny* testifies. *l. 29. c. 4.* Also in some cases and in some compositions, they are good for such as want erection, and do promote venery very much. But as rightly mixt and exhibited in due proportions, they are good for ones health, so being not rightly mingled and given disorderly, they cause cruel symptoms and sometimes death. When *Anno 1579.* I laid in Bath, a certain married man (it was that brazen-bearded Apothecary that dwelt in the Apothecaries shop) he fearing that his Uterus was too weak to drive forth his wives chaffery the first night, consulted one of the chief Physicians, who was most famous, that he might have some fittie prevalent Medicament, whereby he might the sooner dispatch his journey. But when it was day-break almost, there followed a continual diffending of the yard without any venereous desires, and after that bloody urine, with inflammation of the bladder; and the new married man almost fainted away, all Antidotes profiting nothing a great while. I remember that the same thing hapned to a Noble man of *France*, in my remembrance, whom when an illiterate Physician thought to cure him of the Dropsie by giving him Cantharides, one in number inwardly, he killed him with lamentable torments. I have a singular remedy against the weakness of the Genital part, which when I used it indifferently, however it did great help to many Noble men, and no hurt, (who generally are more studious in venereous matters) yet it did but amongst the rest to much harm, that after venery (which he was too much addicted to) he pulled blood continually, and swooned away frequently; truly I think there had been plenty of milk at hand, this *Venus* bird had died and suffered severely for his Lechery and lasciviousness. Thus far for their physical force, now we shall pass to their deadly and ignominious qualities. They are held to be amongst the number of poysons most deadly, not only by reason of their corroding and inflaming, but by reason of a putrefying quality they abound with. Their Juice entering into the veins either from the stomach, or by the skin, destroys a man like to a poyson. Therefore *Quid* when he wished mischief to his enemy, *lib. 1. Trist.* wishes that his enemy might give him the Juice of Cantharides to drink. *Cicero ad Pisonem l. 9. Epist. famil.* Cajus, of the accusation of *L. Calpurnius* is said to have taken Cantharides, and by that means he was resolved to kill himself. *Galen l. 3. de Simp. fac.* writ thus: If they be taken inwardly in a very small quantity, mingled with things fitting, they powerfully move Urine, and sometimes corrode the bladder; whence it is manifest, that all things that kill by a cold quality, if they be taken in a small quantity they may nourish the body; but such as kill by putrefying (as Cantharides do) not at all; since they are enemies to mans nature. *Cassius a Roman Knight*, well noted for his familiarity with *Nero*, when he was sick of a dangerous Tetters, a Physician was sent for by *Cassius* to cure him, who gave him Cantharides to drink, and so killed him. *Pliny*. Also Cantharides were objected against *Caro of Uricia*, (as the same Author faith, *l. 29. c. 4.*) as if he had sold poyson by open sale, because he set them at 60. Sesteria. But when they are drank too largely, or applied outwardly too long and too deep, they are wont to produce these symptoms. There happens pricking and pain in the bowels; which is extended from the mouth to the Rectum, and to the loyns, and haunches, and they ulcerate the bladder with a painful Ulcer, and inflame the yard and the parts adjacent with a vehement Impostume; then they pull blood, and after that pieces of flesh. Sometimes there follows a Diarrhoea and Dysentery, Swooning and dunnels, and the mind is perverted, and there is nauseating and heaving, and a frequent desire to make water, and to stool; but almost it is invaine. They kill a taste of Pitch in their mouths: all which symptoms are set down in *Diocorides l. 6. c. 1. Gal. lib. de Theriac ad Pisonem c. 4. and l. 3. de Temp. c. 3. and in Rhazes lib. 8. c. 17.* To those that are infected and affected, *Diocorides* first prescribes, frequent vomiting, then frequent Urine made with Nitre to cleanse the guts; then to preserve the bladder, he gives milk inwardly and outwardly. And he will have their Clysters made of other matter than at first, namely of Barley Water, Marsh-mallows, white Apples, Eggs, Mustard, of Linseed, Rice-water, decoction of Peacock, Hydromel, far Broths, Oyl of Sweet Almonds, Goose-grease, yalke of Eggs. Also he bids to give inwardly Cowes milk, that is lowe, Hydromel, kernels of the Pitch-tree, the great and

Signs and cure  
of Cantharides  
drank.

the small, sweet new Wine, Ducks grease, a decoction with Diuretick-seeds, (namely the four great cold seeds) and decoction of figs with Symp of Violets. Oyl of Quinces is commended as the certain Theriack for this disease, as also Oyl of Lillies, and Samian clay. *Rhazes* after that Clysters of far Broth are cast in, will have incision made into the yard with Oyl of Roses, and the stick shall be put into a warm bath in a great Vat. *lib. 8. c. 17.* Authors are not agreed in what part the poyson of Cantharides doth lie. Some think it lyeth in his head and feet, and others deny that; yet they all agree that the wings are an Antidote in what part soever the poyson lyeth; and those being taken off it is deadly; so that this venome hath its remedy joynted with it. *Plin. l. 11. c. 35.* *Lysus of Naples* writes that Purslain is an Antidote against Cantharides, which *Pliny l. 20. c. 13.* affirms of white Basil: who also *l. 23. c. 2. and l. 28. c. 10.* Commends very much Vinegar of Squills, Oyl of Dill, Cowes Milk, and Broth of Goats flesh. And thus much shall suffice for the History of Cantharides, which I wonder that the most learned *Gesner*, and especially *Pennin* overlookt.

## CHAP. XXI.

### Of Beetles.

THE Beetle is an Insect that may be called *malis*, as if he had his wings in a sheath. The Name is call'd *staphylin*; the Tyrians, *Bohys*; the Germans *Kasfer*; the Italians *Escaravato*, *Poltero*; the French *Escarbo*; the Polonians *Krawka*; the Illyrians *Krabak*; the English, *Beetle*; or *Bug*; the Northern English call it *Kloch*; but the Southern, *Starkeworm*; the Arabians, *Kanass*; and Their Sex and *Kanass* by *Avicenna*. The Greeks all with one consent, hold that all Beetles are males, whence *Democritus* can easily understand the sense of *Anselmus* his Epigram upon *Marcus* that was gelded. *Rhodiginus l. 8. c. 5.* *Antig.* left renders it to us. Also the Egyptians caused a picture of this creature to be made on the Banners of their Heroes, intimating thereby their manhood, that had no mixture of feminine weakness; for men must be valiant and manly, for the pusillanimity is a great disgrace to them. All Beetles cast their skins, and they have no sting: when you touch them they are afraid, and they leave off to move, and they grow hard. *Plin.* did vainly ascribe to them four wings hid under a crusty cover, for experience the contrary, very tender and frail, wherefore they have them shut up in a hard cover over them, so that they may take no hurt by hard bodies. For the greatest part of them either dig underground, or bites rotten wood with their teeth, and makes houses and nests there: so that if they were not excellent well guarded, they could never keep themselves safe from external injuries. When they fly they make such a humming or noise in the air, that *Laertius* writ that the gods talk with men by these creatures. Of all plants they cannot away with Rote trees, and they hate them as the destruction of their kinde; for they dye by the smell of them (as we read in *Geopon*) but on the contrary they take great pleasure in stinking and beastly places.

I remember one was wont to cleanse privies, when he came into an Apothecaries shop at *Antwerp*, and smelt the spices, he presently fell down in a swoon, which one of the Standers observing, he went and gathered up some horse dung in the street and put it to his nose, and so a man used to stinking smells was recovered by a stinking smell. Therefore it is no wonder if a Beetle (that we said before was bred and fed with dung) being anointed with oyl of Roses, be killed thereby; they are the words of *Clemens Alexandrin.* 2. *Padagog.* which also *Plutarch* elsewhere, and *Eliau* also affirm. They abhorre the smoke of *Aldred*, especially of the kaves as of *Palamus*, *Acegi*, Cow dung, and *Nigolla* feed, *Rhazes* 88. The Hemerocallis of *Diocorides*, is called by some *amethyst*, for the great force it hath to kill Beetles: but as they do extremely shun those plants, so they very much affect Ivy to be under its shade, and they naturally delight to go under it, under which when they are gathered in heaps, it is an easie matter to catch them, for they will hardly go from it. Beetles are some greater, some less. The great ones, some have horns, others are without horns. Those that have horns, some are like Harts horns, others like Goats horns, others have Bulls horns, others have Rams horns: some have horns in their noses: we shall speak of them all in order. The *Andromeda*, or Harts horn Beetle is called *Lucanus* by *Nigidius*; as *Pliny* witnesseth. Some call it the Bull, others the flying Stag: *Hoffschius* calls it *Andromeda*, because it laies hold on things in its way with thorny horns; the Comedian and *Enstathius* call it *Andromeda*, because it is the greatest of all; *Cassius* calls it *Andromeda*, a word compounded of Greek and Latin; *Gaza* calls it *Andromeda*; the Italians call it *Cornis*, and vulgarly *Pelops*; the French, *Cornu*; the English, *Stag-fly*, or *fly-ing*; the Hollander, *Phagende hart*; the Illyrians *Gelin*; the Poles and Slavonians *Krawka*, *Wielka*. Amongst all the horned Beetles, for the shape of its body, length and magnitude, it may challenge the first place, and is the most noted. It is blackish of a dark red, especially about the outward cover and the breast; it hath two whole horns without joints, and with branches like a Stag as long as ones little finger; in such as are grown up, but they are less and shorter



The use of  
broad horn  
Beetles.

The name and  
description.



ter in the young ones: or (as *Pliny* saith) it hath long and movable horns nicked with cloven pincers, and when it will it can bite or nip with them. For it will clove them wonderfully, and useth its horns for that end for which Crabs and Lobsters do their claws. The eyes are hard, putting forth and whitish, it hath fore-yards on both sides of them, one pair that are branched between the horns & the eyes, the joynr whereof makes almost a right angle, and two more breaking forth of the middle of the forehead straight and plain, ending as it were in a little smooth knot; it goes upon six feet, the fore feet are longer and greater than the rest. *Lo-nicernus* makes this to be the male; but I (if there be any distinction between the male and the female) shall not doubt to call it the female; both because the other kinds of beetles are less, (for as *Aristotle* observes the males in Insects are far less than the female) and also in copulation the females receive from the lesser, as experience confirms it. The male is altogether like it, but 'tis less both for body and horns; which though they be not branched on both sides, yet pressed together they do more sharply prick ones fingers than the female doth. The third is three or four times less than the former: a black colour, with little cloven horns, near to which there arise two fore-yards distinguished with many joynrs. It hath eyes a little standing forth, and that are great in respect of its body. The shoulders on both sides end in an acute angle. It feeds for

the most part in a clammy fat juyce coming forth of the oak; nor is it easily to be seen but where oakes grow. The fourth kind is very rare, it hath two little horns, thrice branched inwardly, they seem whitish from black, the back is parted with black and white spots, but the belly with silver coloured and blew. It goes on six feet, which are no less black than the fore-yards: when the head is cut off, the other parts of the body live long, but the head (contrary to the usual custom of Insects) lives longer. This is said to be dedicated to the Moon, and the head and horns of it wax with the Moon, and do wane with the Moon, but it is the opinion of vain Astrologers. The horns

are not without their Medicinal vertues; for they cure childrens diseases; for hanged about their necks, if they be great horns and full of branches, they serve for an Amulet. Laid to scrophulous humours and the Gout, they help much, especially if they be applied with the earth they have cast up. *Pliny*. If horned Beetles they call flags, be boyled in wine, and the arteries of the armes be anointed with it, it cures Agues. *Miraldus*. But I note by the way that *Guillerinus* of shell fish, was not very wise, who writing a Book of the Nature of things, was quite out; when he placed that flying Stag amongst the Grasshoppers; sometimes he makes it a Locust, sometimes a *Bruchus*, sometimes he confounds it with a Glow-worm, conjecturing every way, but teaching nothing. The Philosopher saith that those Stag-flies are bred only from worms growing in rotten wood. But I rather approve of it, that they breed from dung as experience testifies. *Aristoteles*, *ταχινισκος*, *αεγυβος*, *αεγυβωνος* (these are words that are synonymous) in Latine, *Capricornus*; the Germans call it *Holz-zack*; the English *Goat-chaffer*; in greatnels and colour it resembles broad-horn, it hath a little broad head, great ox eyes, almost three fingers overthwart in length; it hath a forked mouth, gaping and terrible, with two very hard crooked teeth; with these whilst he gnaws the wood, I (speak by experience) it doth perfectly grunt aloud like a young pig. May be this is the reason why *Hesychius* hath related that they bound to a tree, will drive away fig-gnats. The shoulders of it are curiously wrought by nature, they seem to be a hilt made of Ebony and polished, it hath six feet, distinguished with three little knees; but they are very weak and faint, and altogether unfit for such a burden. These receive help by two horns that grow above their eyes, and are longer than their whole bodies, they are flexible with nine or ten joynrs; not exactly round, but are rough like Goats horns, which although it can move them every way, yet when it flies it holds them only forth directly, and being wearied with flying, the useth them for feet; for knowing that his legs are weak, he twists his horns about the branch of a tree, and so he hangs at ease; as our *Brurnus* saw in the Countrey about *Heidelberg*; in that it resembles the Bird of Paradise, which wanting

feet

feet, clings about the boughs with those pendulous nerves, and so being tired with labour, takes its ease. They thrust upon us some German fables, as many as say it flies only, and when it is weary it falls to the earth and presently dies. Those that are slaves to tales, render this reason for it: *Terambus* a Satyrist, did not abstain from quipping of the Muses, whereupon they transformed him into a Beetle called *Cerambyx*, and that derelictly, to endure a double punishment, for he hath legs weak that he goes lame, and like a thief he hangs on a tree. *Antoinus Libealis* lib. 1. of his *Metamorphosis* relates the matter in these words: *The Muses in anger transformed Terambus because he reproached them, and he was made a Cerambyx that feeds on woods, he is seen upon wood, and he hath crooked teeth, and he always moves his jawes; he is black and long having wings on his belly, as the greater Beetle have; he is called the Wood-eater One; but in Testimony Cerambyx, The children catch them to play withall, and they pull off its head and carry it, and it serves with the horns like a harp made of a Tortoise-shell.* Which words, whilst *Xylander* strove to put them into English (one otherwise well skill'd in the Greek tongue) he committed two great errors; first by taking *Cerambyx* for a Bird when he called it a Fly; secondly, because he translated it, that the head with the wings are like a Harp, when as the Greek book hath it the horns. But whether this be that kind of Beetle that runs up and down, and makes a noise like a kid in the leaves of Euphrasia; (the Wizards say there is no better remedy to cure the voice) truly I am ignorant of it, but I suppose it is the lesser Beetle, because the talk of Fennel gigant would scarce contain

this when he is grown great. We have seen divers kinds of *Cerambyces* besides this we now speak of; one that was like to the first of these, but differing in magnitude and colour; the belly thighs and horns were of a waterish blew; the shoulders, tail and cover wings were varied with some black spots, also the joynrs of the horns were black; the hinder legs grew longer than the rest; we received these from *Quickelbergius*, who sent them from *Antwerp*; we have one more that is green without, and underneath dun coloured; the head, shoulders & cover wings are a dark green, and shining also with gold; it is something a long body, and seems like the other, but it is something less; it hath purple horns, but the feet and the legs are of a violet colour. I first gave to *Pennius* a third that was of like colour to this, it smelt almost like *Nutmeg* and *Cinnamon*. But that sweet smell (as good as the oyl of Myrrh) presently when it dies evaporates into the air, and leaving the body, doth wholly insinuate it self into the box it was kept in. *Cardanus* makes mention of this Beetle, but I know no man that found it before me. There is yet one of a shining black, that hath a great belly, thick, with a body and horns shorter than the rest, the joynrs of the horns are not round as they are in the rest, but lightly saw'd on both sides. *Pennius* saith he is beholding to *Carolus Clusius* for it. The fifth is altogether like the first for head, mouth and teeth, with very black eyes; a brown colour all over the body, a mouth wide open and depreed; the head, neck and wings are bespored with very small black spots; the body of it is almost as great as the second *Cerambyx*; it is but seldom seen, it lives in houses and dry wood. The sixth is ash-colour with a very little head, they eyes are both white, the horns are somewhat long, joynred, distinguished with white spots; the cover wings, and almost the whole body



is various, it is conversant in houses, but whether it dwell in wood also I know not: I saw the seventh brought from *Russia* by *Edward Elmers*; it was brownish all the body over, it had round joints on the horns 7 or 8, it is easily known by its form. There is an eighth kinde not far differing from this in figure and magnitude, but that the head, shoulders and wings are blewish.

*Johannes Camerarius* sent a ninth to *Pennins* (he was one that deserved singularly of the Common-wealth of learning) the wings and feet were of a sandy colour; the head, the horns and belly were blackish; he had bowed horns made with many turnings and knots, which he turned to both sides in the twinkling of an eye; it creeps upon plants (especially on *Cytisus*) I think the Beetle which *Johannes de Chant* describes lib. de varia quercus historia, ch. 26. is of this kinde: There dwells a creature in the oaks, of the kinds of Beetles (so far as we can conjecture) it is of a blackish colour with long legs, carrying two prickles in its head a little crooked, where with he lays felt hold of what he meets with. Those Carpenters that bew timber of oaks, found this little creature alive in the very heart of the oak. The country people of *Lyons* call it *Thurro*; it lives best and longest in roofs of houses, and it sometimes comes forth and shewes it self making a little noise, in places where fowles are. *Gesner*, of pious memory, *Epist. l. 3.* saw such a one, or one like it, voided by an old woman that was sick of a Pleurisie, his words are these. An old woman that was sick of a Pleurisie, voided a black Beetle downward, after she had drank a Potion of our Oymel with a decoction of *Rennegreek*; it had long feet, horns that were jointed and were flexible; it was full of raw putrefaction, and alive; it was as long as two joints of ones finger. The tenth is all purple coloured from black, and hath a forked mouth. The eleventh is all black. The twelfth hath horns that are not so much jointed, the head and shoulders are blew; all the rest of the body seems a bright red. However you see the horns of all these, some straight, others crooked in their pictures, (for to explain them the better) yet for the most part they wear them with a bending of them backward to their shoulders, as goats do, as you see the first *Cerambyx*; and upon that account I think it fit to put them into the same rank. And thus much for *Cerambyx*, or *Capricorn*, and its kinde.

I have learned no other use of them, in Physick, than that taken in the left hand, they drive away quain Agues, *Plin. l. 30. cap. 11.* it may be pothery, by better experience will discover more of their vertues, and will not suffer themselves to be persuaded that a creature God hath made so curiously can want rare vertues in Medicaments, which he hath bestowed on far baser things (according to his goodness unto mankind) Flitter-mice take this for their chief dainties, and prefer it before Gnats, especially if they can catch them and squeeze them alive.

*Blasius*, or *Tenebrion*, Oxe, or Buis horns rather, hath alwaies two horns standing straight and right forth; it is blackish from red, and seems almost without any head; yet it hath a very small head sunk into its short thick shoulders, and a little thorn comes forth of the middle of the forehead, very sharp for defence. We have seen four kinds of Nose-horns, the chiefest and greatest of all lives in *Ardis*, it is very black; it hath a nose on its face crooked horn'd like to the stem of a ship; about the middle whereof there is another horn bent inward, and comes forth of a little knot; and such another comes out of a bunch on the shoulder; the whole body from the end of the horns to the tail is four inches long, and it is about two inches broad. Like to Beetles it hath no female, but it shapes its own form it self. It produceth its young one from the ground by it self, which



The Ule.

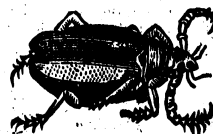


*Joh. Camerarius* did elegantly express, when he sent to *Pennins* the shape of this Insect out of the storehouse of natural things of the Duke of Saxony; with these Verses:

A Flea began me, nor yet did I proceed  
From any Female, but my self I breed.

For it dies once in a year, and from its own corruption, like a Phoenix, it lives again (as *Monimus* winneth) by heat of the Sun.

A thousand summers heat and winters cold  
When she hath felt, and that she doth grow old.  
Her life that seems a burden, in a tomb  
Of spices laid, comes younger in her room.



The second kinde of Nose-horn very rare and worthy to be seen, sacred to *Mercury*, *Carolus Clusius* sent painted from *Vienna*, where it is very frequent, the form is as you see it: it would seem all pitch colour, but that the belly is a full red; that crooked horn in the nose is so sharp, that (what is said of an Elephant going to battle) you would think it had got an edge by rubbing it against a rock. The third Nose-horn, and fourth seem to be alike, but that the former hath wings growing out longer than the sheath covers, but the others are shorter. You would say they were rub'd with shining ink, they are so perfectly all over black. The Ram or *Arctonotus* hath knotty horns, violet colour, a head greenish from gold colour, the shoulders like vermilion, a purple coloured belly, sheath wings of the colour of the head, it goes forward with legs and feet, of a light red, but the wings shut up in the sheath, do fitly express the small whitish membrane of a Cane.

The greater Beetles without horns are many; namely, that is called *Pilularius*, and another that is called *Melolanthus*; another purple, one again that is dark coloured; one called *Arboreus*; and another *Falla*. Some call the *Pilularius* the dunghill Beetle, because it breeds from dung and filth, and also willingly dwells there. The Greeks call it *καρπύς*, and *σκαθάρης*, and from its form like a cat, *καρπύς*; the Germans, *Roskafer*, *Kaas*, or *Mistkafer*; in English, *Dung-beetle*, *Sharnbugg*; in French, *Fouille merde*, as you would say *Dung-digger*; the Latines call it *Pilularius*, because it turns up round pills from the dung, which it fashions

by turning it backwards with its hinder feet. *Porphyrio* doth thus describe the nature of it: All your *Pilularii* have no females, but have their generation from the Sun; they make great balls with their hinder feet, and drive them the contrary way, like the Sun it observes a circuit of 28. daies. *Ælian* saith almost the same. There is no female Beetle, it puts the seed into a round ball of dung, which it rowls and heats in 28. daies, and so produceth its young: They would say

Rrrr

thus









yellowish, and of the same colour are they a little above the beginning of their legs, the joints of their bellies are whitish. In Normandy they are much more numerous every year, and therefore they call it *L'au des hannetons*. It is recorded in our Chronicles, that in the year of our Lord 1574. on the 24. of February there fell such a multitude of them into the River Severn, that they stopt and clog'd the wheels of the Water-mills: and indeed, unless together with the industry of men, the Hens, Ducks, Goat-milkers, Castles, Bats, and other Birds of prey (which seem to make these their dainties) had afforded their help, the Mills had been so choked with them and stood still.



There is another taken to be of kind to this, of a colour like a Foxen brown white, its belly gray and as it were hoary. Of what use it is in Physick I confess I know not. Fowls indeed when they have laid their eggs, bait their hook with two or three Dots of tree Beesles, and tie a line to one of their legs, which they cover with flags, that their wives be not covered: the Duck for greediness of meat presently swallows the hook, and sticking fast she is punished for her folly. How Cranes are taken, with these wrapped up in a gourd, he that hath a mind to know may read *Gaster de Cr.*

The Beetle which *Pliny* calls *Fula* is more rare, and not every where to be met with. It is not very common to be seen here in England, so far as I have heard of.

which, rolling balls of dung, this little framer, some black, like the scarabeo Moor are seen. The noble sort are dark with green: so back hath (so compare green things with small) a mark you may the half Moon call. The English call it the Moon's horse; so renowned, but had there a're so fait bien souvent. Mary a Sepiramis would love us them. And Centaures had the number men.

And indeed most of the Beetles are hideous black; yet I make no question, but some of them have their shining with a blacker, others with a more pleasant green. There are also that shine like gold; and those very great ones, which dig up the earth, and make their nests there. Some there are which fly about with a little humming; some with a terrible & with a formidable noise; so that they would not a little fright one that is not aware of them. There are other differences also of shapes amongst them: but their breeding in dung, their feeding, life, and delight in the same, this is common to them all. Another Beetle of a purple colour was brought to us from Constantinople, which (only that its eyes, belly, and feet were like pitch) was all over of a purple and violet colour. The black one, which lives in dry woods, is formed after this manner: It is all over black, or russet rather, as if it were clad in mourning; its mouth is forked, its shoulders almost square, its legs and horns somewhat short; it seldom flies; but goes for the most part, and murmurs while it is going, as lewd servants use to do. The Tree-Beetle is very common; and every where to be met with, especially in the months of July and August, after Sun-set; for then it flyeth giddily in mens faces with a great humming and loud noise, and vexeth carrel. These Beetles spoil the leaves of trees, which they do not so much eat as tear in pieces out of an inbred malice; for they feed upon gnats. We call them *Dorrs* in English; the Dutchmen *Baumkaffer*; *Loubkaffer*; *Jo. Agricola l. de Insectis. Anis, Suckefer*; the French *Hannetons*. The sheaths of their wings are of a light red colour, and covered as it were with a very fine flower, otherwise they shine but a little; their legs, feet, and prickly tail are of the same colour: its other parts are all of a brown: only that the circle about the eyes, and their small horns are

read. *Gaster* sometimes translated that which *Arifolius* calls *Arifolius*, whereas he always intended that the Dung Beetle only should be known by this name, and he gave proper appellations to all the rest. Neiches can the Fuller Beetle be called the red Beetle, (as *Pliny* confute) nor is it a creature with a forked tail, which *Hadrian* mentions upon us, for that *Fula* for the forked tail is not of the sheath wings kind, as I shall shew more at large in the history thereof. This Beetle certainly is a fair one, bigger than the Tree-Beetle, but somewhat less than the fern Phrygian Hart: It hath a head almost homely, furnished with two little horns; its eyes and hairy breast are of a yellowish white; it hath feet coal black; its belly and tail are of a red colour; its feathers; its shoulders and wings are so beautifully wrought with black and white specks, that you would easily think it were a cloathing of Damas embroidered after the Phrygian manner. Magiobius says, that this Insect is singular remedy against Quartan Agues, being bound on each arm, it may be believ'd *Pliny l. 10. c. 11. Penus*. And had the picture of them *Comenius* in his *Infirmis*; but *Quack* *quack* *quack* afterwards put him over the creature it self.



## CHAP. XXII.

## Of the lesser Beetles.

NIXX NANO

ALL the lesser Beetles are either spotted in their body, or unspotted: the Greeks call those *Stoxeis*, divers colour; and those *Stoxeis* of one colour. The spots of some of them are all a black colour inclining to white, others of them are yellow; others are red. Of those that are white from black there are seven kinds, of the yellow ones thirteen; of the red ones twelve; which we have here ranked every one in its several order. Those that are unspotted, are observed to be all over of the same colour; and of them we have seen six blackish ones, two of a bright bay, one round, one of a skie colour inclining to black, another between yellow and black. And one was very rarely observed by us painted with a light red; another seem'd to be of the purple fish. We have five which are as yellow as gold, very like the *Comenius* in his *Infirmis*; but *Quack* *quack* *quack* afterwards put him over the creature it self.







likewise elsewhere) to speak of that fire only which is under the sphere of the Moon, that that productive no living creature; not of ours, where there is both mixture, and no pure fire. But they yet urge: Our fire is *Substantia mixta*, a substance of most subtil parts, and seizeth upon all things that are in its way, devouring them and turning them into its own substance. This was answered before when we danced in some things which are rather perfected in the fire, and which fire is by no means able to consume or turn into its substance. *J. Laurus* (a man of much reading, and a most learned Philosopher) and from him *Cardano* agrees that some Animals may live in the fire, but not that they can be bred there; for in this they yield to the Philosopher. But who seeth not how absurd this yielding is? for I cannot see how things generated in a temperate place, should be able to live in that extreme. For that which they say of the Salamander, is as good as nothing. The Salamander (as *Diogenes* hath observed) doth not live long in the fire: for as soon as that moisture, which runneth down on every side from its yellow spots (as I conceive) while it staves in the fire, is consumed (which is quickly done) it is presently brought to ashes, as *Pannius* hath made trial with our *Bruners* in the Countrey about *Heidelberg*. *Erasmus* a most learned Physician, disputing about rotten Feavers, endeavoureth to overthrow all this history with these arguments. First, because *Aristotle* completh the History (saith *Erasmus*) who, it is confessed, writ many things from hearsay; I grant it: but then he adds, *ut aiunt*, as it is reported, or some other word of the same importance (as *Niphus* hath well-observed) even as in that very place, speaking of the Salamander, he addeth, *ut aiunt*. We may observe that this is the constant practise of the Philosopher, when he speaks according to the opinion, or from the relation of others; but grant it were so, that he from others related it; they were deceived (saith *Erasmus*) who related it to him; imagining those creatures bred in the fire, which fell by chance into it. But the circumstances of the place make it appear that this is false. If they had fallen into it. But the circumstances of the place make it appear that this is false. If they had fallen from elsewhere into the fire, surely by his own confession they would be consumed by the fire. And unless they had been bred there, (as I said before) how should they be able to live in such an extremity of flame? Besides, spectators have observed the motion of their feet, the number of their wings, their flying, yea their death, and the cause of their death, viz. their flying somewhat too far out of the fire. These things and the like evince that those relators were not at all deceived, but that they related what was true and unquestionable. But no Author either before or since *Aristotle* affirms this, but one or other perhaps who hath transcribed it from him. This is more (*Erasmus*) than you know, you have not read all Authors Books: the greatest part of books is lost, as it appeareth plainly out of *Athenensis*, and Histories bear witness. But how I pray you, saith *Pliny* to be assured that Fire-flies have four feet? He did not learn this from *Aristotle*, nor is there any such thing to be found in his writings which are extant. Wherefore either he learnt it from others, or else the History was known in *Pliny's* time. *Pliny* therefore added this, that he might make up the History complete. Nay, if you had read *Cicero's* *de Nat. Deo*, you had found him affirming for certain, that there are little winged creatures bred in the middle of the fire. Neither did I before think you so ignorant in Theology, as not to know what *S. Augustinus* (*l. de Civit. Dei* 21. c. 2.) hath observed of these *Pyribia*: There are, saith he, creatures which live in the middle of the fire; and there are found some worms at the Spring-head of hot waters, whose heat no man toucheth without harm: while these remain there not only without receiving any hurt, but are not able to subsist out of them. And *Vincennius* *lib. Nat. l. 20. c. 68*. In some waters which are naturally hot, there are certain Worms which live as well as Fishes in cold: nay if they go out of those waters into cold they die. *Silvius* also confirmeth it *c. 17*, who calleth these kind of Flies *Carytis*, and reporteth that in *Cruis* they fly into hot furnaces without harm. Yea and *Seneca* (*quæst. natural. l. 2.*) affirmeth that some living creatures are generated of the fire; and therefore these Fire-flies likewise; as lately *Marsilius Cognatus* teacheth us in a large Discourse, *Variar. observ. l. 1. c. 23. 24*. Do not then any longer contend, that no Author either before or since *Aristotle* affirmeth it; since besides these pious and grave men already named, I can bring others also, who would convince you either of plain falsehood, or of a levity not hard to be discerned. But *Theophrastus* maketh no mention of it in his Book *de Igne*. What do you conclude, *Erasmus*, from thence, that the History is false? Very fine. Perhaps he believed it not; is it therefore false? But it is probable, I grant it. There are many things probable, and yet false, as experience teacheth us. *Erasmus* wrote many things against *Paracelsus* which are probable, yet not all true, unless those things which he understood not, betune. Certainly he endeavour'd to confute many things, which I know he never understood: I will not now descend to particulars. Well, but the heat of fire is not *placuit* fit for generation. This, *Erasmus*, you apprehend not; but I told you before, that if it were in the seed, it were not; which was the Philosophers meaning. For it is *obscuro, corruptivo*, according to *Aristotle*: But I answered before, that fire doth not corrupt all things. This barrenness therefore, or (if you please) destructiveness of the fire is to be limited. Nor truly do I conceive this to be done miraculously, but by the power of Nature; neither do I take it for a tale, but for a History agreeable to nature. And as for what he writeth of the Salamander, he adds *ut aiunt*, as I said before: there was no need to add it. But I beseech those who believe nothing but what they see, to tell me, Have any one of the ancients found fault with this History, or confuted it? I speak of the Greek writers. No, not so much as *Galen*, who otherwise is a most sharp reprehender of the Philosophers, and would have laid hold on this instantly, if he had had any

any such opinion. Therefore it is likely that the history is true, because none of the old writers found fault with it. But come we now to *Matthiæus*, who of all men hath contradicted this History most unphilosophically; for in his margin he inveigheth against the vain opinions of the Philosopher (as he thinks) where he appears in some things vainer than vanity it self. But I will return to the business. It is against (saith he) the work of nature. Is it enough for *Matthiæus* to say so, though he prove nothing? If the story had been true, *Galen* would never have omitted it, who hath searched out all things else so diligently, furnaces, and metals, and what not? *Jacobus Scaliger* will make answer, to what end should he repeat a thing known before? Sooner would he (as he was a famous and a malicious detractor) if he had not found it so, have reprehended it, as he doth in some places make it ridiculous. He which continued so few days, did not understand the whole matter; they were not, they are not always at hand; he never enquired of the Bakers. But if I should say that a little the colt newly foaled should have plenty of milk in its udder, and that it did issue forth in great quantity, what would they say then? yet nevertheless I say it at London about six years since, as also many others of good note and credit, who with their own hands did milk it out of its teats. They will say perhaps, we do not believe it; let then chide, it makes not much to the matter; there are many productions of nature, the causes whereof it is impossible for any man to know, much less to shew to others. And that certainly not without great reason, that we might both admire the infinite power of God, and acknowledge our own blindness and ignorance. For these and the like did God create only for his glory, that he might both confound the shallow understandings of men, and also learn them to acquiesce in his wisdom only, for so much as in teaching out the natural causes of things, it is impossible to go any farther. For this is amongst the works of God that may pluck down our ambition, and makes us with all our wit to fly to that common Anchor of fools, namely hidden causes and the whole substance. What have we then to do? surely only to apply our selves unto him, from whom all wisdom, knowledge, and perfection doth proceed: for whilst we rely on our own wits, and do pry into the Majesty of God, we mult needs (as *Solomon* in his Proverbs speaketh) be confounded by the same. What then remains? this surely, that they which think these things to be impossible, do keep their opinion to themselves, without meddling with those that think the contrary.

The Author of the *Geoponicks* (if I am not deceived) calls this little animal a Salamander: his words are these: *Ζαυαυδὲς ἢ ἀνδρῶν ὡς καὶ τῶν ἰσχυρίων, &c.* that is to say, The Salamander that little creature is begotten in the fire; and living in the fire, is not consumed by it. Here he tells three untruths together. For neither is this the least of creatures, but oftentimes bigger, sometime less, neither is it generated by the fire; nor doth it live long in the fire, as I said before, out of *Discordias*. Thus much I thought good to add, lest young students reading those *Geoponicks* should erre so foully with *Zoroaster*. For what purposes it serveth, I cannot boldly say: yet by its place of growth and principles it seemeth to dry and cleanse powerfully. It is also of very thin parts and body; it pierceth to places very distant: and truly if the Grasshopper which feedeth upon air, be of so burning a faculty; what shall we think of the Fire-fly, which exeth and drinketh flames? But the Fire-flies are of this use to our minds: they represent to our understanding the wonderful power of God, who hath made the greatest of all the Elements, Fire, subject to so small, to dry a creature: vouchsafing to be vanquished by these while it scorseth. I do not say to be vanquished (to use *Maipolus's* words, *Dier. Canic. Colloq. 5.*) but even to much as to be touched by men, or the greater Animals.

## CHAP. XXVI.

## Of the Water-Spider.

The Water-Spider is next, a little creature of exceeding nimbleness, whose History Authors have so lightly handled, that we can hardly pick out any thing of weight or moment towards the illustration of this History: we shall yet perform what we can.

I utterly deny *Aegus* in *Aristotle* to be the same with *Tipula* in *Plinius* (as *Gaza* interprets it) for I am not persuaded that Mule-gnats can come of them.

It is called in Latine *Tipula*: *Plantus*, *Festus*, and *Nonius Marcellus* write it *Tipul*; others, The Naddi; *Tipulla*; *Gwillerinus de Conchis* reads *Tapula*; *Albertus* and *Vincennius* in his *Speculum*, call it *Tappula*: none of them aright. By *Plantus* it is called *Tipula*; in Greek (as I found in *Gesner's* papers) *νίβαν*, which word truly I finde not any where any footstaps of, nor can I tell what it properly signifies; some High-Dutch call it *Wasser-gins*, which is to say, a Water-goat; others *Wasser-spin*, which is a Water-spider; the Netherlands, *Wasser-spinne*; with us it is called the *Water-spider*, as which the High-Dutch and Netherlands, for likeness sake; in Spanish, *Gusano que corre sopra el agua*, a worm that runs upon the water; in Italian, *Capra di acqua*; in Polonian, *Wood ny cicheck*.

There are two sorts of Water-spiders, the greater and the less. They differ in bigness only, or perhaps in age: the greater are more common in coldest waters the less are somewhat more blackish and of a more compact body.

The greater more inclines to an ash-colour, being of a larger body. Although several men write feverally, and neither tell any certain marks whereby it may be known, nor agree in the number of its feet, yet I hope we shall so clearly and perspicuously explain the History of the Water-spider, that there will be no occasion of doubt left hereafter.

The Description.

The Water-spider is a little creature, in shape very like a Spider, of a body somewhat long and slender: it hath four feet fast to its breast; and two little arms stretched out before near its mouth, perhaps in stead of horns; which if you reckon with its feet, it will have six feet: which yet (so far as we could observe) it useth not when it runneth: they are as short again as the rest of its feet, neither have they any knots or joints like the other feet. Therefore *Albertus* and others allow but four feet to the Water-spider: but *Festus* fix, reckoning these little arms together with its feet. It hath four wings, very feeble ones, which seem not to be made for flying, but for leaping. They are shorter than its body, and the uppermost of them a little thicker and larger than the others, but yet not of leather (like those sheathy cases) they are between a brazen colour and a black; the inner wings are lesser and thinner, and of a silver colour. Whether they fly by night like Water-beetles or no, we are uncertain; they leap sometimes upon the water so lightly, that they scarce so much as stir the surface of it. Hence grew that proverb among the Ancients, *Lighter than a Water-spider*. So *Pierius* being to express the lightness of men; and *Virgil*, the nimbleness of *Camilla*, compare them to the Water-spider. *Plautus* likewise in his *Perisæ* says; *Tipula levius est pondus quam fides lenonia* (for so *Lambine* reads it, against the consent of all copies, even that of *Nonius*) *A Panders* himself is lighter than a Water-spider: It runneth not in a continued course, but with intermission. It goeth not under water, but when it is driven thither by force: its body is never wet. They are found all the Summer time in standing waters and ponds which are free from the wind and quiet: sometimes also they are met with in rivers, especially close by the banks of great rivers, and for the most part under the shades of trees (as of the willow, or any other tree, (which is not over tall): most commonly multitudes of them are together in companies. They are seen sometimes to couple leaping on one another's backs, but they make an end of engendering very quickly. One shall hardly find any one of them in Winter.

Their Use.

Whether they be of any use in Physick, besides the common use Flies are of, we leave for others to make experiment: for we know of none; nevertheless we utterly deny that these little creatures were brought forth by nature to no purpose. Certainly the Gudgeon, the Roach, the Pearch, and other inhabitants in the dominions of the waters do sufficiently declare how useful they are for the feeding and fattening of Fishes. Without question *Festus*, *Nonius*, *Marcellus*, *Sipontinus*, and others, meant this Water-spider now described, as it will appear by their words. The *Tipula* (saith *Festus*) is a kind of little creature, having six feet, but so light, that in running upon the water it seemeth to take no steps. *Perisæ* saith upon the matter the same. The *Tipula* (saith *Nonius Marcellus*) is a very light creature, which doth not swim but goupon the water. *Varro* thus: *Levis Tipula levissime frigidos transis lacus*: for so the place which is corrupted, is to be read and corrected: *The light Water-spider very nimbly passeth over the cold ponds*. *Albertus Guillerimus de Conchis*, and *Vincencius* call it *Aranæus Aquaticus*, interpreting the Dutch name (for it hath some likeness with the Spider) ascribing but four feet to the *Tipula*, not reckoning the little arms which are before, among its feet, since it doth not use them in going. Others (as I said before) reckoning those little arms among their feet do allow Water-spiders six feet. Hence it does most certainly appear, that we have described that very *Tipula* which *Plautus* mentions, so that there is no room left for any ones doubting hereafter. But before we go any further, the truth requires of me, that I confute two notorious errors of *Guillerimus de Conchis*. The first error is, when he saith that the Water-spider lives alike upon the water and upon the land: the other, when he saith, that it runneth very swiftly upon land; both which do evidently contradict experience: for upon land it doth not live long, nor run at all, but move with a very slow pace, and sometimes leap, but that very little.

Whether *Catrab* in *Avicenna*, which is called by *Sylvaticus*, *Cutnub* and *Eckentnub*, be the Water-spider (as *Wierus* thinketh) I cannot say for certain: although indeed I am easily persuaded by reason of the circumstances, to believe that *Catrab* in *Avicenna* is not the Water-spider. But let us hear *Avicenna*'s description: *Catrab* (saith *Avicenna*) is a little creature having its being on the surface of the water, which moveth upon it divers waies without order, and dieth ever and anon to the bottome, and presently appeareth above again. *Sylvaticus* hath almost the same word for word: only he adds, that whensoever any thing happens amiss to it, it runs away, and by and by appears again. From this little creature by reason of its restless and disordered motion, higher and thither, that kind of melancholy which the Greeks call *anagasthêsia*, the Latines *Insania Lupina*, is called by *Avicenna*, *Catrab* and *Alcatrab*; with which when men are taken, they fly from the livings, and go out by night, and frequent graves (as *Paulus* writes) and think indeed that they are turned into Wolves, as *Wierus* writes it befall a certain husbandman in Germany in the year 1541. The Ancients (saith *Wierus*) call a fly which is common in moorish grounds, *Tipula*. And we think *Macrardus* made mention of this somewhere in his Epistles. Wherefore I am fully persuaded that *Catrab* is not this Water-spider, but some other little creature,

creature, the least of the kinde of Water-beetles, which with a restless motion moveth almost continually upon the surface of the water higher and thither without order (as we said in the History of them) and upon the least disturbance or stirring of the water, goeth to the bottome, and presently hideth itself in the mud, but by and by as soon as the billowes are down, riseth up again to the surface of the water. This little creature is seldom single, but many of them sport together in the same place, running up and down several waies. I was once wont to behold with great delight these little very black and shining Beetles pulling one another, and as it were wrestling together. But of these we have spoken at large among the Water-beetles. And we shall take *Gaza*'s *Tipula* into our consideration among the Water-worms.

The word *Ascaris* which they interpret *Tipula*, maketh nothing toward the illustration of this History.

## CHAP. XXVII.

### Of the Forficula, or Earwig.

*Arnoldus* his *Forficula*, is called by the later Latine writers, *Auricularia*; by the more Ancient, *Mordella*; *Niphum* calls it *Vellicula*, from rending; the French call the Earwig *Aurailles*, or *Perceauraille*; the Germans, *Oren-worm*; the Low Dutch *Orenmetel*; the English *Earwig*. *Hadrianus Junius* thinks it to be *Filio*, which notwithstanding much differs from the form of a Beetle. Is this the Greeks *Spindon*? truly both the original of it and the biting agree thereunto; for this is bred also in the hollow stalks of herbs, (as of the wilde Parsnip, Angelica, Fennel Gigant) and is frequently seen in Coleworts. The Northern English by an obscene name call it *Twichballock*, as if you would call it *Scrotomordium*, or *Spindon*, for where ever it findes a rivled pleated skin, it will cause very great pain, either by biting with the mouth, or by winding about it with its forked tail; which *Penninus* saith once happened to him being a boy. For we fell upon two sorts of Earwigs, both were with wings, contrary to the opinion of many. For if you force them here and there back again with a bull-rush, when they are hem'd in in some place or upon a table, (which the most illiterate *Knives* taught and described: *Penninus*) they will presently open their wings that are hid under their covers, and fly away. But on you must take diligent heed that you press it not too hard with a straw or ruff, or wound it, for then if it would never so fain it cannot fly away. The more common is seen with a light red colour; his foreyards, feet, and forked tail are yellow. The other (which is more rare in England, and was seen by me but once or twice) is greater than the former, and of a blacker body, hath a silver ring about the neck to adorn it; the outward covers of the wings are of a reddish colour; the mouth is forked and yellow; on the back on both sides near the sides, there arise five yellowish spots, the fork of the tail is short and black, and she lifts this toward her head and Ries, being angry, into the air.



They are oft found in Coleworts and hollow Reeds, and in the little blades of Elm leaves. They breed of worms that breed in the stalks: they yearly cast their old skin, and that being gone they look white as snow. But with age it grows again, and is died with its ancient colour. The English women hate them exceedingly, because of the flowers of Clove-gilliflowers that they eat and spoyle, and they lay snares for them thus: They set in the utmost void places Ox-hoofs, Hogs-hoofs, or old cast things that are hollow, upon a staff fastened to the ground, and these are easily stuf with cloathes or straw; and when by night the earwigs creep into these to avoid the rain or to hide themselves, in the morning these old cast things being suddenly taken away and shook forth, a great multitude of them falls out, and are killed with treading upon them. *Arnoldus Breviar.* l. cap. 25. bids us boyl them in common oyl, or oyl of Hearts-ease, and with that to anoint the arteries of such as are in a Convulsion, both their temples and wrists, to cause a Feaver, which is a remedy for a Convulsion. *Josephus Michaelis* an Italian and a famous Physician, is wont to collect a great number of them, and to bring them to a fine powder in Balneo in a glass very close stopp'd. Then he mingles as much powder with Hares piss, that he may pour into the ear morning and evening. He often protested to *Penninus* that this was a secret to cure deafness. Others mingle the powder with oyl of Cloves and use it as before. The smaller *Gallinago*, (which the English call a Suite) and Hens feed on Earwigs: and I well remember that I have found a great number of them in their Mawes;

The Name.

The difference and description.

Their Use.



## CHAP. XXVIII.

## Of the Scorpion, the Ant, and flying Lice.

**A**ristotle 4. de partib. c. 6. denieth that Scorpions have wings, Scorpions (saith he) move not flying, but going. But latter ages since him have seen and acknowledged some of them to be winged. Apollodorus (witness Pliny) relateth that some of them for certain have these words: Neither ought any one to be too forward to believe those things, Scorpion Nature more rarely representeth; nor yet to be altogether incredulous concerning them: I never saw any where flying Serpents, yet am I easily persuaded to believe that there are such, because a man of Phrygia lately brought into Ionia a winged Scorpion of the Locusts kinde. Paramenes also l. de Best. Venenatis in Egypt. reporteth that he saw, not with other mens eyes, but with his own eyes, Scorpions with wings, and armed with a double sting in their tail. With whom *Ellian* agreeeth l. 16. c. 42. 43. *Megasthenes* hath recorded that there are some in India among the *Prasii*, which have wings, and are *Amphimachus* *musitan*, exceeding great ones. In *Africk* likewise there are some winged, and others without wings; having seven joints in their tails, saith *Strabo* l. 15. *Geogr. & l. 17*. The *Pylis* (saith *Pliny* l. 11. c. 25.) have often endeavored to bring them over into Italy, but they were not able to live beyond the climate of Sicily: yet there are seen of them sometimes in Italy, but harmless ones, and in many other places, as about *Pharus* in Egypt. We read also in the History of Navigations, that *Jambolus* the Portugall, while he stayed at *Palimbrata* (it is a City situate by *Ganges* towards the East, and according to *Diodorus Siculus* built of old by *Hercules*) saw there great store of winged Scorpions. It might be called in Latine, *Nepales* quasi *Nepa* alata, for so *Plinius* calls the Scorpion in *Casina*, when he saith, *Recessum eadem ad parietem imitatur nepem*. So again *Cicero* 5. de Finib. *Nepas aculeo uti videtur*. *Varro* also and *Columella* do very often call the Scorpion by that name, although *Festus* understand by it a crab. *Noonius* writeth that that name was borrowed from the Moors, by whom Scorpions were first called *Nepa*, and brought into Italy. Thou seest here its ordinary bigness and shape; It is of a colour very like honey, whereupon it is called *melichorus*. The last joint of the tail in this kinde is black, armed with a double sting, as if one could not do mischief enough: it hath wings like the mandible of the Locusts, it goes obliquely and after the manner of a Crab; it is very hurtfull to men, especially to young men and boyes. *Ellian* ascribes to it a glittering red colour, and calleth it flame-colour. Its poison being hot, causeth extreame heat; which happeneth otherwise in the Scorpions which have no wings. It kills Lizards, Adders, Snakes,



Whirls, and all kinde of Serpents, *Ellian* l. 8. c. 13. This kinde of Scorpion being applied to a wound made by it self, healeth it, as others do: and if the steele of one of them burnt come to other Scorpions, it driveth them out of a house.

Its Generation is after the same manner with theirs that have no wings, of which we shall treat at large in the second Book.

The Ant is called by the Latines *Formica* à *ferendis* micis, from carrying grains of corn, saith *Isidore*. The Greeks call it *μύρμηκας*, *μύρμηκας*, *μύρμηκας*, *μύρμηκας*, and *μύρμηκας*, by *Hesychius* and *Varinus*; it is called in Hebrew, *מְרִמְקָה*; in French, *Fourmis*; in English, *Ants*, *Emmets*, *Pismires*; in Spanish, *Formiga*; in Italian, *Formica*; in the Slavonian and Polonian Tongues *Mramorci*; in the Illyrian, *Mravka*; in Low Dutch, *Mier*; in Flan-drian, *Lahnets*; it Dutch, *Ompes*, *Ommen*, *Eims*. Now some Ants are winged, some without wings. One of the Greeks call those that are winged (of which only we treat in this Book) *μύρμηκας*; another calls them *οὐροί*; they are named by *Aristotle* *τρυπανοί*, and simply *μύρμηκας*, l. 1. de Anim. part. by the Latines *Equestris*, because of their exceeding swiftness, wherein they excel the others. They are of a larger body and bigger limbs than those that go and have no wings, (whereupon *Pliny*, if I mistake not, call'd them *Herculeana*) and of a middle colour between black and swart: they have four silver coloured wings; their uppermost bigger and longer than their whole body; their inner wings half so big. I have nothing that I write for certain, concerning these Indian flying Ants. For Authors themselves are uncertain, and many late writers, having travelled over almost all India on foot, have yet found none of those gold-holders and devourers of flesh; Of which *Megasthenes* hath recorded thus much: There are found (saith he) among the *Darda* certain winged Ants no less than Foxes: Now the gold-stealers understanding that they feed upon the flesh of wilde beasts, strew pieces of it along the waies, and so while the Ants are over-busie about their meat, they take away without danger all the gold they had all this while stolen. *Onciscritus* writeth that he saw some of their skins like Panthers skins. The Book entitled *De Natura rerum*; so describes this winged creature, with hooked claws, a winged

body, and a crooked beak, that one would take it for a Griffin rather than an Ant. That *Ethiopia* also breeds such, we read in *Philostratus*, who placeth Ants and Griffins also in India; which are not very like one another in shape, but both trusty keepers and diggers up of gold. The horns of the Indian Ants, set up in the Temple of *Hercules* at *Erythra*, were a wonder, as *Pliny* witnesseth, or rather lieth. He that desireth more dreams concerning them, let him read *Herodotus*, *Arriani*, *Tacitus*, *Strabo*, *Ellian*, and *Pliny*, who gave so much credit to lies carried to and fro and entertained, that they were not ashamed to put them down even for truths. But passing over the Indian Ants, let us treat of those in Europe only; whose course of life, fights, victories, policies, prudence, sagacity, parsimony, cunning, frugality, industry, economy, charity, fidelity, civility, valour, and laboriousness I would to the shame of men represent here; but that it would be necessary to repeat the same things in the second Book, when we shall treat of those that go, with which they agree in nature, and belong to the same Common-wealth. With these *Herculean* Ants bruised, and made the Oyl Silt and Pepper put to them, the Manginels, the Leprose, and the Scurfe are cured, *Plin.* Oyl made of winged Ants, provoketh and strengthneth *Venus*. *Wecker*. To conclude, whatsoever diseases other Ants are good for (and they help very many, as you shall read) the winged ones have the same or greater virtue in curing of them.

*Agatharides* tells us, that the *Acridophagi* or eaters of Locusts are not far distant from the inhabitants of the Red sea: which nation are of a lower stature than others, lean of visage, and extreame black. About the Vernal Equinoctial, when the South-west and West winds blow with the *Italians*, an unspeakable multitude of great Locusts is brought to them with those winds; out of some place unknown, which differ little from birds in their faculty of flying, but in the shape of their body very much. With this sort of creatures they are nourished all this season, feeding upon them salted or otherwise drest. And they catch them by stretching them down from the air to the ground with a snook. And these people are reported to excel in nimbleness and swiftness of foot: but taking a very dry nutriment, they do not prolong their life beyond forty years; nay and dye more miserably than they lived; for when old age draws nigh, there breed in their bodies certain sorts of flying Lice, in figure indeed like Dog-flies, but otherwise less; they begin at the breast and the belly, and in a short space eat up all the skin of their face. Others of them are taken like those which have the Itch, thereupon they tear themselves grievously, and at length the disease being at a stay, and thin humours running at the coming out of these little creatures, they are slain poor wretches to undergo intolerable torments: and so by reason either of ill humors, or of their feeding, or of the badness of the air they die. *Hieron. Mercurial. de morb. c. 1. ex Dioscoro Siculo 4. Antiq. lib.*

## CHAP. XXIX.

## Of the winged Punie or Wall-Louse.

**W**hen I had resolved to conclude this History of winged Insects, we had three wood Wall-Lice of the sheath-winged kinde brought to us, which we here represent upon their backs, and upon their bellies. The back, the neck, the little homes, and the sheathy cases of the first are of the colour of a Leek; its wings which are longer than its sheathy cases, are between green and yellow, as also its eyes and feet. The second is of a swart colour all over. The third hath its body variously coloured with black and red; its little horns and feet coal-black; all of them do glitter here and there with a golden brightness (which *Pennius* observed not) and seem to be of a very compact and tender body. They are found sitting most commonly upon Mallows, sometimes upon other plants and trees that bear Apples like Pine-apples, as likewise upon the Elm and the Willow. They copulate in the month of May tail to tail, and are almost a whole day about it. The male is less, the female bigger and broader. They fly in the heat of the day-fast enough, but neither long nor far. There are bred with us (saith *Cardane*) in the grass two Animals like Wall-lice, the one in smell but not in shape; the other in shape but not in smell: but neither of them is of the species of Wall-lice, because they both fly. *lib. de variet. rer.* But he that shall observe their stink and outward shape of body, will not turn them out of the family of the Wall-lice, for their wings sake: although indeed the field kinds are six times as big as those in houses. *Jacobus Quickelbergius* sent two other kinds of them to *Pennius* from the parts about *Vienne*, which were waved with a golden and black colour. *Matthioli* not at all understanding



Their Medic-  
nal use.

*Pliny*, denieth that they have any vertue in them. But *Pliny* many waies commendeth the garden Wall-lice, being reduced to ashes and infused in oyl of Roses, against pains of the ears. *Palladius* useth these with the Lees of Oyl, an Oxe Gall, Ivy-leaves and Oyl, for an oymntment for the bitings of venomous Horseleeches. Let the head of the yerd be put into Oyl of Camomil pretty hot, in which Wall-lice have boyled; then let the head of the yerd when it is taken out of the oyl, be anointed with pounded Garlick, and the patient will certainly make water. *Arnoldus de villa nova* l. 2. *Breviarii*, c. de stranguria & dysuria. Are not these to be taken for those Wall-lice, which the Dutch call *Knulsters* and *Qua-sters*? And hitherto hath been said what we know of winged Insects: ye *Pteris*'s, *Camararius*'s, *Clusius*'s, *Quickelbergius*'s, and ye later and more laborious sons of *Esculapius* (whom *Phœbus* moulded out of richer clay) if you have any thing which is here wanting, make addition of it, according to your wonted courtesie and ingenuity, remembering that of the old Poet:

*Kal Mē n, ē, lāpē n • dōdovē al Mēnō Sogēl.*

*When you receive, you ought to give withall:  
The Muses gates are wide, and liberrall.*

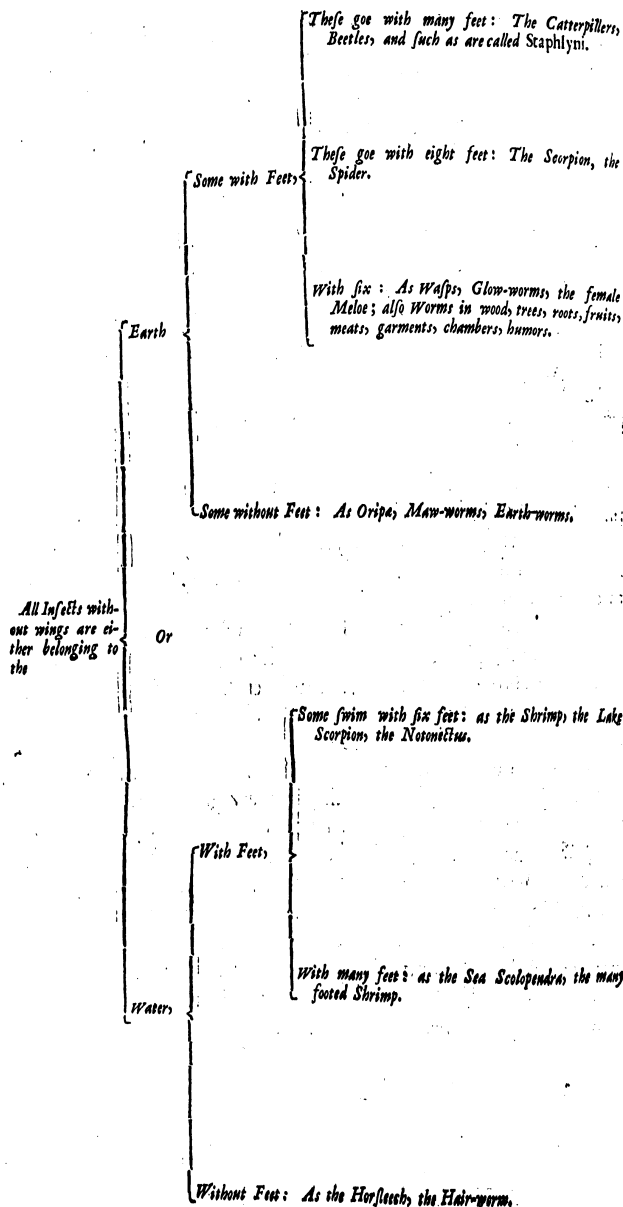
OF

## Of the Division of the Second Book.

### The Preface.

**B**Y the clew of *Dædalus* we are at last got out of the Camps of winged horsemen; where should I relate with how many stings the Insects of the lower ranks have assaulted me, how much they have troubled my brain, my right hand, my eyes, whilest I accurately dissected and observed all their parts, truly I should either faint in rehearsing the wounds, or what I was resolved in my minde to finish, I should not be able to do. Wherefore, what valiant souldiers are wont to do, whilest the wound is yet fresh and hot, we will break forth into both Armies, and with better undertakings, so far as may be, strive to overcome them. Thou O great God, who in the Inventory of these smallest Creatures, makest the most excellent understandings to stand amazed and stupid; give me strength, that as by thy goodnes I have mustered those Insects that fly, by the same I may be enabled to draw forth all those Foot-forces that want wings; so that in all my labour, I may seem to have no other end than to seek thy glory, to advance learning, and nothing that concerns my own particular, but that I may finde thee in these thy works. Go to therefore bold Atheist, who art ignorant of God and the Divine Perfection: endure, if thou canst, the biting of the Spider *Phalangium*, or of the Scorpion; abide the pain of the Worm *Scolopendra*; swallow down the Pine-tree Catterpillar, contend with Worms, despise with *Herod*, biting Lice, so much as thou art able, at last thou shalt finde that there is no foot Souldier so mean in this Army, that will not quickly overcome all the forces of thy body and minde, and will make thy foul mouth to confesse, by their ministry, that there is a God. Thus then I draw forth my Regiments, so I muster the Souldiers.

44



# THE THEATER of INSECTS: OR, Of lesser living Creatures. BOOK II.

## CHAP. I.

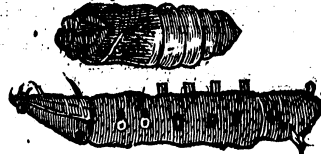
Concerning Caterpillers and their several kinds, and namely of Silk-spinners, and Silk-worms.

**W**EE thought fit to place in the Front, Caterpillers, the devourers of Egypt: because they are most different in their kinds, and also some of them are excellent for their use and worth. It is no fond conceit to maintain that Caterpillers had their name in Latine from devouring, for they eat up leaves, boughs, flowers, fruits; which also may be observed in the Peach. Ovid called these Field-worms:

*Field-worms that weave their hoary thread on boughs, we find  
That they with painted Butterflies do change their kind.*

The Greeks call a Caterpillar *akmon*, from the waving and vaulting motion, when it creeps, whereby it lifts up and contracts it self. The Hebrews call it *Ghazam*, because it sheareth the fruits of the earth, as *Kimhi* saith on *Isaiah* the first. The Italians call it *Rugoverme*, and *Bruchio*, for so saith *Marcellus Virgilium* upon *Dischorides*. In our times, saith he, our whole Countrey calls all kinds of Caterpillers *Bruchi*. The Spaniards call them *Oruga*; the French, *Chenille*, *Chatepaleuse*; the English, by the name of *Caterpillers*; but the Northern people call the hairy Caterpillers *Oubus*; the Southern call them *Palmer-worms*; in the Poles language, a Caterpillar is called *Rap haufanka*; in the German Tongue *Eis Raup*; in Low Dutch, *Ruype*; in Slavonish, *Gashenica*; the Pelants call them *Cerrin*, and *Cedebroa*.

It should be endless, if I should add all kinds of Caterpillers; for some feel rough, others The different soft, some have horns, (and that either in their head or in their tail); some are without horns; some have many feet, some fewer, but none have above sixteen feet. Most of them move swiftly in a waving posture; yet others there are that go even and slowly. Some do yearly change their old skin, and others do not. Some are changed into *Aurelia*'s fixed above the earth, whence are bred your ordinary Butterflies, others are transformed under the earth, and become Glow-worms. Also some of their *Aurelia*'s are smooth and equal; some again are hairy and wrinkled, pointed at the ends, sharp; some (namely of the harder kinde) naked, but others (namely of the tenderest) are covered with moss or filken down. The most of them are bred of the eggs of Butterflies and are changed into *Aurelia*'s: some are bred on the leaves of trees, of the proper seed left there in the web in Autumn; or of the dew or air shut up in it, and corrupting there, as Vine-feeders. Some again feed on leaves, some on flowers, and some on fruits. We, to express both kinds of Caterpillers, shall divide them into those that are bred from other things; and those that are bred from their own kinde alone. Such as are bred from other things, again, are either smooth or hairy; as also those are that proceed from their own kinds. Amongst the smooth Caterpillers, the Silkworm deservedly challengeth the first place.



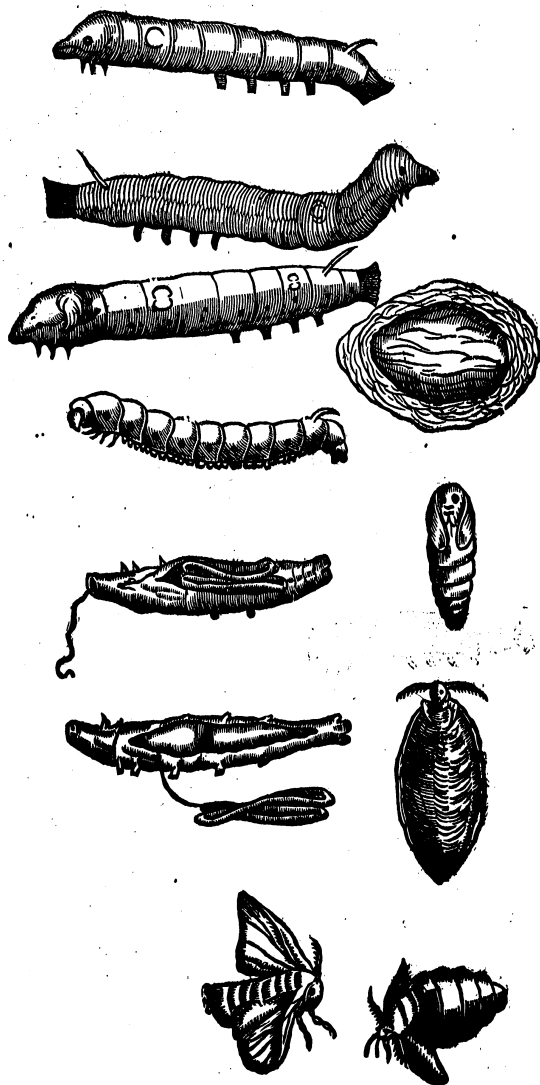
Edward Moris-  
um Borealis,  
lib. 5.



A worm that to a Fly transformed us and then:  
I transformed back, once more is made a worm again;  
Twice it bith dies and lives anew, is wasted ore  
by Chaon's race into the Elizian shore.  
Its successor is left half living and half dead,  
Which after spins silk robes for those are finely bred:  
First thread this Silk-worm makes, why doth she labour thus?  
It is not for her self she labours, but for us.  
Her fleece was formerly an ornament for Kings,  
But this prodigious age confusion brings:  
So prodigal of silks, that the vile rable, clown,  
Oyster-wives, herb-women, shine in silk suits and gowns:  
Nothing more common now, for all than silk attire,  
Which wastes and burns mens hearts with continual fire.

In which words, though our divine Poet, who was more clear than the ancient Birds, doth something touch upon the Silk-worms, and paint them forth, yet he doth not describe them to fully, that it may suffice for the History of them. For Silk-worms are smooth Caterpillars almost of a milky colour, with small black eyes, and as you see, with a so ked mouth. The snow white ones are bred of Butterflies eggs, which growing by degrees into little worms, produce Silk-worms of the same colour with Butterflies. And that I may not repeat this again, let it suffice that I have once said it; the Butterfly is almost always of the same colour with its Caterpillar. That Butterfly forsaking its Aurelia, as many eggs as it leaves, or seeds (if you will) like to eggs, they become so many Silk-worms afterwards; which, if you cherish them, when they are fostered by the Sun's heat, and full fed with Mulberry leaves, they will repay a reward worth your cost and care, namely a silken fleece. They breed first in May, in which month and the two following months, they devour a multitude of leaves, and in eating as it were by sucking, they harden: when they are grown up with plenty of nourishment, being become able, they spin a molt fine web out of themselves, like to a Spiders web. Then against cold weather, they grow rough with hair, and make themselves new thick coats for Winter, by the sharpness of their claws, pulling the down of their skins into fleeces: then they thicken and close it, carding it with their feet; then they draw it out amongst the boughs, and make it small as with a comb: lastly they take hold of this web, and wrap their body in it, making a round nest. Then men take them, and put them in earthen vessels, and feed them with bran, and so there spring up: feathers of their kinde; which, so soon as they are prepared with, they are set to perform other tasks. But the spinning work they began, grows pliable by moisture, and is spun into threads on a small spindle. Some women do use to draw it forth into yarn, and then they weave it. *Pamphila* the daughter of *Laius* was the first that was reported to have woven in the Island of *Co*. Also *Pliny* reports that Silk-worms are bred in that Island; *Plin. lib. 11. cap. 23.* the flowers of the Cyprus, Turpentine, Ash, Oake-trees, being beaten down to the ground by showres, whence they receive life. Though women were the first inventors of this Art, yet men are not ashamed to wear these garments for lightness in Summer. The customs of men are so far degenerate from Arms, that their very cloathes are grown burthen-some. The thinner and softer the leaves are they feed upon, the finer Silk these Silk-worms make: wherefore amongst the people of *Seres* in *Seybia*, the most soft garments are made; which we call silken, as *Marcellinus* witnesseth, *lib. Hist. 23.* In *India* also and in *Egypt* there is great plenty and use of them, and are brought from thence to the *Spaniards* and *Italians*, being the greatest cause of wantonness amongst mortals. So often as I consider, that some ten thousands of Silk-worms labouring continually night and day, can hardly make three ounces of Silk, so often do I condemn the excessive profusion and luxurioufness of men in such costly things who defile with dirt, Silks and Velvets, that were formerly the ornaments of Kings, and make no more reckoning of them now, than of an old tattered cloak, as if they were ashamed to esteem better of an honourable thing than of a base, and were wholly bent upon waste. The Greeks call this Caterpillar *ois*, and *Bombyx*, which name is become Latine. The Italians call it *Bigatto*; the Spaniards, *Gusano della seda*; the French, *Ver à Soye*; the Germans, *Eis Seyde worme*; the English, *Silk-worm*. Amongst whom a Silken habit is so much loved and valued, that they despite their own Wool, (which compared with Silk, is not contemptible, and is the most profitable and the greatest merchandize of the Kingdome.) But time will make them forgoe this wantonness, when they shall observe that their moneys are treasured up in *Italy* at that time, when they stand in need of it for their private or publick affairs. This is a pleasant thing and worthy to be noted, that the head of the Silk-worm makes the tail of the Butterfly in that golden coloured Metamorphosis, and the tail the head; which also, happeneth in all other Caterpillars that are changed into an Aurelia.

The Name.



## CHAP. II.

## Of the rest of the smooth Caterpillars.

Green 5. ALL the other smooth Caterpillars, are either green or yellow, or reddish, or dark, or various colours. The chief Caterpillar of the green, is that which hangs upon the Privet;



a circle surrounds the face of it, and all its feet; and it hath a horn turned backwards in the tail. They are black and red, spots are made athwart their sides, they are half purple, half white; the small spots are red, but their whole body appears green. That upon the Elder-tree differs not much from it, but that it is altogether green, except those overthwart spots very white, and some little points like milk. It chiefly feeds on the reddish coloured Elder.



The third, that is all green, when Autumn comes is transformed into a blackish case: it feeds on the softer Pot-herbs, especially on Lettice, whence we call it the Lettice Caterpillar.



The fourth upon the Medlar-tree, is less, all over green, drawing it self into an ash-coloured case, all besprinkled with most black spots.



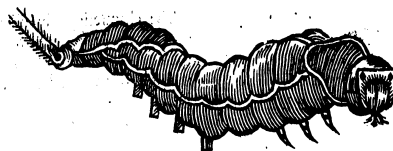
The fifth is least of all, spins its threds on trees, (especially upon the Oaks, and descends by them upon the heads of those that pass along, and intangles their hats and cloathes: a very little creature, most noted in Summer, and obvious every where, when the fall of the leaf is at hand; he wraps himself in a coarse web, and being shut up in a red and green cover, he dieth in Winter. He hath but ten feet, as all the rest that went before had.



We call them yellowish, that are most part yellow: such these figures present you with, which is kept, wheresoever they are void of black, overcast that with a paler yellow, and you have their figures painted. They live on softer leaves, especially on the Tiel-tree.



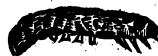
Yellowish are 3.



*Vinnla* is next in order; which is a most delicate Caterpillar, and beautiful beyond belief, we *Vinnla* have found it on the Willow feeding greedily, the lips and mouth of it are a pale yellow, the eyes are fiery, the forehead is purple, the feet and the lower body green, the tail is forked, blacker than grapes, the whole body is spotted as with thick and dark red wine, which passing from the neck crossway to the very tail, a most white line doth wonderfully adorn it.



The Caterpillar called *Porcellus* Dark 3, is black, brown, especially the greater, but the lesser hath the circles white. Frequently they are found on the leaves of meadow Trifolie, and they devour them with wonderfull swiftness.



Three various colours are chiefly observed: the first hath a blewish face, and very black eyes, the outward skin of the back is grayish, much besprinkled with black and yellow spots: it is changed into an *Aurelia* of a bright bay garnished with a white small membrane: it loveth Cabbidge and all kinde of Turneps.



The second hath the head and feet and tail very black, being chequered with yellow; the chequerings that are painted on them inwardly, are distinguished by channels black and gray, drawn longways by turns. It loveth Fennel, and Anniseed, and Cummin.

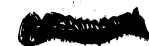


The third is green from white, bunched as it goeth along, for it hath only six feet on both sides, as those before. It is changed into an *Aurelia* (see with pricks, of a dark colour. It consumes Olives.

The fourth feeds on Dragon-wort, and resembles a spotted Viper: it goes always with the head upright, and leans chiefly on its breast. It loves Bulrushes, and plants that bear down, and are bred in rivers.

If you paint the ribs descending of the fifth kinde with old *Minium*, there will be few things in the picture that shall not agree with the truth.

In the sixth what you see white, paint with Oze. Both of them delight in the black Poplar-tree, and feed greedily on it.







The chamferings bred in the seventh, must be white from yellow; all the rest of the body is of a dark colour, and changerh it self into an Aurelia, of a light red colour.



The eighth seems of the colour of ashes, waving out of black: it makes a case between black and a bright red, whence grows a dusky coloured Glow-worm.



The ninth is various, and deversely thought so: the roundles of the incisions are green; the horn of the tail is bent backwards, and is of a bright blew; under which a red coloured spot serves to make it beautiful: the middle part of the incisions is ashes colour. Lastly, an Aurelia is included of a murky colour. We found this in the high way; it delights in the field Crow-foot.

The tenth is gray and black; for what is here white, lay gray upon it, and it will represent the creature. It is changed into a spiral case, of a weak blew colour; the roundles being somewhat red, and it comes next to the form of a horn fashion periwinkle.

The smooth Caterpillar comes from the wilde night-shade (which the Italians call *Nolana*) of a green and yellow colour, it hath a horn in the forehead as long as ones finger, which *Cardanus* relates that he saw often.

### CHAP. III.

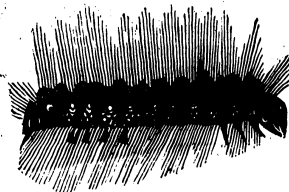
#### Of Caterpillars rough and hairy.

Those with hairs are the most mischievous of all: some are very thick of hair, others thinner; whereof I here afford you the kinds. Amongst those of the thickest hairs, are walkers up and down, such as are upon Nut-tree leaves, Pine-trees; such as have long hairs, such as are called *Nephria*, Pear-eaters; such as are upon Nettles, Cabbage, Hedges, feeders on Poplar, such as lose their skins, such as are amongst Marigolds, black and green, &c. Those that have thinner hairs are *Echini*, dwellers amongst Fennel, eaters of bushes, half white: of which we shall speak in order.

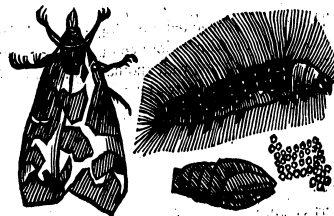
*Pityocampes*, that is, Caterpillars on the Pitch and Pine trees, are as thick as Mans little finger, and as long as the breadth of three fingers. They have eleven incisions between their heads and tails, and they have sixteen feet like the rest, namely about the head on both sides three, on the middle of their bodies on both sides four, and at the ends of their tails on both sides one: but the first are crooked and small, wherewith they try their way, the rest are broader and jagged like saws, that they may lick the faster to the boughs. The head is like an Ant, the rest like common Caterpillars; they are rough with hair and encompassed on all sides with straight bristles: the hairs bred on the sides are white, they shine on their backs; the middle part of the body is adorned with spots like to eyes; the bristles being shaved off, there is a black skin underneath, their hairs very slender, yet they prick more sharply than a nettle, and cause very great pain, heat, Fever, pricking, inquietness. For the poyson enters suddenly without any wound or the wound, and is carryed to the parts next the bowels. They spin fine webs like to Spiders, drawing and dipping their threads with their fore-feet. Towards night they go under these, as they were tents,

tents, that they may escape the inconveniencies of cold and storms. The matter of this tent is so soft and fine, that it is not in danger by the greatest winds, nor is it soild with rain: and it is so spacious, that a thousand Caterpillars may be under it. They make their nests in the small boughs of the Pine and Pitch trees, where they live not solitary as others do, but by flocks; which way so ever they bend their course, they spin and carry their thread for the web along with them; and at break of day, if it be but fair weather, the great ones accompany the lesser by troops, and having made the trees void of leaves, for they consume them all, they labour hard in weaving. Only these plagues of the Pine and Pitch trees do not meddle with other Cone Apple trees. In Mount *Atbos*, the woods of *Trens*, and in the vallies beyond the *Alps*, they abound very much, by reason of plenty of leaves for their nourishment, as *Matthiæus* witnesseth. They are truly most venomous creatures, whether you touch them outwardly with your hands, or they be given inwardly. They were of old esteemed so certainly to be poyson, that *Ulpian* interpreting the *Cornelian* Law concerning private murderers, set down amongst them to be punished those that give a Pine Caterpillar to drink. *Sext. Alium. ff. ad leg. Corn. de sic.* When one hath swallowed a Pine Caterpillar, the pain grievously afflicts both the mouth and palat; the tongue, belly and stomach are greatly inflamed by the corroding poyson: also a wonderful pain vexeth them, though at first they seemed only to feel a pleasant kinde of tickling: great heat followeth, loathing of meat, and a perpetual desire to vomit, but ineffectual. At length if it be not helped, they burn the body, and make the stomach crusty almost like to Arsenick. *Diag. Actium, Plin. Cels. Gal. alio 11. simpl. c. 5. and Avic. 9. cap. 25.* Hence it is that *Actium* and *Egineta* held it dangerous to set the table for meat under the Pine-tree, or for to stay there, lest perhaps by the reek of the meat or vapour of the broth, or by noise of men, these Pine Caterpillars should be moved and fall down upon the meat, or should let fall their seeds, that are as deadly as themselves. They that are hurt by these must use the remedies against Cantharides, for the same means will cure them: but properly oyl made of Quinces, called *melinum*, and oyl Olive, is to be drank twice or thrice to cause vomit, as *Diocorides* from *Actium* hath prescribed. They are bred, or rather regenerated, as Vine-creepers are, from Autumnal seed left in the web in certain bladders, or from the Vine-creepers themselves corrupted, as *Scaliger* thought.

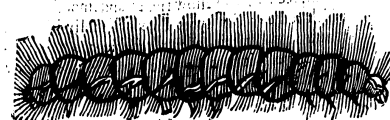
Now we proceed to walkers about. We call those walkers, who have no certain houses or food: wherefore they do something superstitiously wander like pilgrims, and like to Mice, they always feed on others meat, wherefore the English call them *Palmer-worms*; namely for their wandering life, for they dwell no where, though by reason of their hair they are called *Bear-worms*. They will not be tied to any kinde of flowers or leaves, but they pass on boldly, and taste of all plants and trees, and feed where they please.



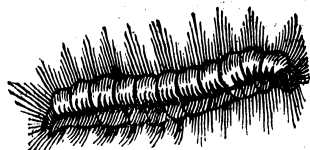
First those white spots which we see in their sides, must be such really; the whole body is black, all the inward hairs must be somewhat yellow, but all the uppermost on the back must be hoary, except those three ranks that are bred in the neck near the head, for they have the same colour with the hairs of the belly. Out of the Aurelia of this comes forth the Butterfly which you see here: whole colour, figure, and nature, we described in the Book before.



The second, if you make the neck and belly, and the hair there growing, yellow, you need do no more. The cover of it seems dusky, the eggs are pale. We explained the Butterfly that grows from thence in the former Book.



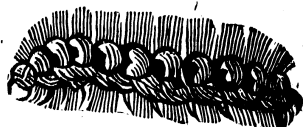
The third is, the whole body and hair, dusky yellow, but that the spots on each side being obliquely made in each incision lie hid, and the head being of a light red, is adorned with a certain white fork.



The fourth hath his belly and lower hairs dusky; the back and upper hairs are yellow from dusky; a double forked line in the face resembles the colour of whey, or milk mingled with water.



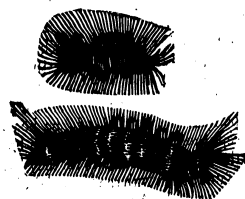
The fifth hath a bright bay colour in the face, the sides of the belly hoary, a body various with small yellowish spots; and above these with black; yellow hairs come forth like small rags; they are sharp, and growing more sharp pointed from the middle: it hurts much the neighbouring herbs and the corn.



The sixth is a brown colour'd, if the incisions were not dyed with black and white spots here and there; the hairs are bred above and beneath, and set after a saw fashion; they are very rough and hard, but they are of the colour of the body.



The seventh hath a black skin, yet its hairs something of a dirty colour, I use to call it the *Penfil*, because on both sides of the forehead, and also in the rump a soft pensil breaks forth of a crow-black colour: but those wedge fashioned eminences that you see in the back, are white as milk at the root, otherwise somewhat black.



The eighth holds forth a Mouse colour, on whose back those seven joints resemble it.



The ninth is a strange and rare colour: for all the incisions are painted with various colours, and from another, yet mingled one with another, which a silver stud doth adorn separately one by one.



The tenth is amongst the sports of wanton nature, not less elegant than it is rare, being streaked with black, green, blew, yellow ridges, and smooth strings; which some golden spots do wonderfully illustrate: it hath very soft hairs, of an admirable and most pleasing freshness; it hath a purple cover fortified with a small membrane.



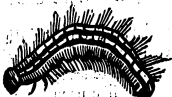
Suppose the white incisions of the eleven to be green as Leaves, and paint the skin and hairs half green.



The Nut-tree Caterpillar is of a pale green, except three black spots between the joints, and that horn at the end of the back, and growing as it were on the rump, which receives a fresh rose colour. It is especially met on the leaves of the Hazel-nut, whence we call it *Corylina*. It has two kinds: of them, one was a full, the other a paler green.



The manifold delicacy of Nature shines forth in these, to which though it giveth them the face of a *Moor* or *Egyptian*, yet it affords them a garment that is of changeable colours, shining in divers works and real art; in the forehead, the hairs are knit as into knotty locks, and resemble the tail-yard: the like are found in the extremity of their backs. The skin is like the rain-bow, and shines in circles deeply dyed with purple, which nature hath fastned to the sides like broad fluds; the hairs bred in the skin, shine like the Sun, and dazzle our eyes in a clear day.



We received two *Nenfria* out of Normandy, the first had a face of a blew colour, and the body ridged with white red and gray streaks; the hairs are comely with a golden shining colour. The latter rolled together is like an Urchin; the head is cole-black, the body is variously spotted with little blew spots; the hairs resemble a Saffron tuft.

This corrupts the back of the pear-tree, having a black ridged face; the body is adorned with some black red white ridges; in the middle as it were of the shoulders, and to the end almost of the back, little swellings or bunches arise of black and blew colour, sprinkled with white spots. The Eggs from whence they breed are a bright bay colour, which is also the colour of the *Aurelia*, and of the hair. We saw another of the same kind, but only it had a bunch on the back.

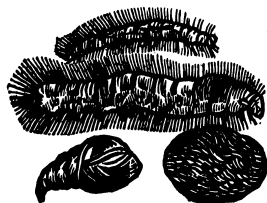


We call that half white, which is by nature yellow from the head to half the back, and the rest white as a Lilly. The belly is yellow and red coloured, adorned with fluds, and chequered in the middle.

If you touch the feet of the Nettle Caterpillar lightly with a fading yellow, the figure will differ little from the natural: it hath hard upright hairs growing like thorns, they wound with a small touch, and at first they cause a pleasant itching, but venomous; but after that a pain hard to be endured. Some maintain that it is more venomous than the Pine-tree Caterpillar.

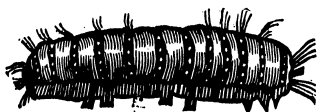


On a Cabbage a Caterpillar breeds with a bright blew head, his body is marked with two yellow branches on both sides; between which a grayish plat as it were, seems to be spotted with some black seeds: the hairs obtain the colour of the Aurelia, which is ashes colour.



Here we shew you two hedge Caterpillars, the greater hath a face Saffron coloured, but that triangle you see in place of its nose, was Lilly coloured: the body is varied with spots, white, yellow, red and black, (which we have expressed) placed in no order; it is rough with yellowish hairs: it devours the leaves of hedges and makes them naked: where at length, leaving a bottom of yam of counter silk, she draws her self into a cocle of a bay colour, as into a sepulchre. The lesser hath a countenance blewish, as also the whole body, except that it hath spots black and white; it hath hairs of the same colour with the former.

These have fewer hairs: namely, Cranebill-eater Caterpillars, St. James wort Caterpillars, Sayl-yard, Urchin, Bramble Caterpillars, and that little horn beast, which the Germans call Horn-worm.



We have here set down exactly the form and magnitude of the Cranebill-eater, you must make the white spots that adorn its back girdles of an iron colour; and paint the belly and feet, and the white lines between the girdles, with a Leek-green colour. *Camerarius* sent this to *Pennius*; with this subscription: A great Caterpillar feeding only on wild herbs, and is especially an enemy to *Crowfoot* Cranebill in the *Marishes*.

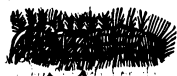


The body of the Sayl-yard is various; from the head to the third incision, you would say he were lined with chalk; in the five following with ashy dark colour, and on the three last with white lead; the hairs are made of hairs as they are placed together, like like stand up at the end of his back like a crest: Those four tufts on the back are made of hairs also growing in order like to teeth.

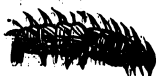


St. James wort Caterpillars, or that which eats the greater Groundel; with the head and feet of a decayed purple colour, the belly of a pale green, and the body of an amplexant fading green, and adorned with black yellow and fiery coloured spots; the colour of the hair agree with the belly.

I have observed two kinds of Urchins, one of a blewish green, the other a mingled white.



The first of the Urchin Caterpillars hath a chequered body, varied with black and yellow; the thorny bristles seem yellow, when Autumn comes it is transformed into an ashy coloured Aurelia.



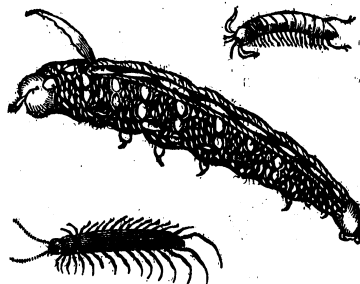
The second is perfectly like an Urchin, half the back, namely the first half, is black from yellow, the later is white from yellow; it hath pricks very sharp and thick, of a grayish colour.



Nature hath painted the bramble Caterpillar ashy black, on both sides with three ridges of a pale yellow colour: the hairs are very thin, and altogether black.

There

There is also the horn Caterpillar, who hath many green spots from yellow, the hairs bred on the middle of the back are hoary, but the horn is notched and red.



Many diversities there are of these Caterpillars upon the Mullen, Hop, Pile-wort, Bitter-sweet, Nightshade, Elder, Elm, Bafil, Tythimals, and almost every herb hath its particular devouring Caterpillar: which that I may not prove tedious, I overpass, as well enough known. I never had the hap to see the stinking Caterpillar of *Gefner*, described by him in these words, as I have it in writing: It is, saith he, most like the horned Caterpillar, but it differs something in the horns and colour. I took one creeping on a wall at the end of *August* in 1550. It sends forth a filthy smell, that you would verily believe it were venomous: it was angry, and with its two foreset it held the head always upright: I think it is blinde, it was a finger long, and thick; it was rough on the back and sides, with a few hairs scattering on them; the back was black; the colour of the belly and sides was reddish from yellow: the whole body is distinguished by fourteen distinct knots: all these joynts again have a prop or wrinkle over the back; it hath a black somewhat hard head, the mouth is forked and dented, or saw-fashioned; whatsoever it catcheth with these pippers, it bites it: it goes on seven feet, as most of the Caterpillars do, without doubt it is venomous, *Verganius* thought it to be the Pine-Caterpillar; others thought it was *Scolopendra*. But its number of feet will not let it be *Scolopendra*. It could scarce endure the small while I took the description alive: it did infect two foves with an extreme and intolerable stink, that I could not stay to endure it: so sayeth *Gefner*.

#### CHAP. IV.

Of the original, breeding, nourishment, and change of Caterpillars.

Dear book, the faithful witness of my pain  
Let not the purple and thy fair cheeks stain,  
Whilst I in tables paint the rude worms: race  
And such as change their skins into a case.  
For these by Gods wise hand created are;  
Which in small things is wonderful and rare;  
And more to be admired in worms, than Whales  
Or Elephants, Leviathan with scales.  
Arm'd as with harness strong as iron bars  
And roars like thunder terrible in wars;  
Who drinks the sea and spews it up again,  
Compar'd with worms, will be admir'd in vain.

So I shall begin with our Poet, who observed a divine power in Caterpillars from their Original; which whilst divers Authors have diversely exprest, I know not into how great dark:

darkness they have call us. *Aristot.* 5. *Hist.* 19. writes, that they begin from green leaves of the beets, as from Cabbage, or Rascia; namely by a seed like Miller left there in Autumn, whence little Worms proceed. From these Worms in three daies space Caterpillers breed at the end of the Spring; which being augmented and nourished sufficiently, they leave off moving, and at the beginning of Autumn they change their form and life for an Aurelia. *Pliny* saith that dew thickned by heat of the Sun, is left upon the leaves, whence he derives all kinds of Caterpillers, to whom *Arnaldus* agrees: others say they all come from Butterflies; which so soon as they come forth of their Aurelia, they thrust forth (above or beneath the leaves hard by) some eggs (the barbarus call them *Turds*) and these are greater or less, according to their bodies (some of these have blew shells, some yellow, some white or black, green or red) in fourteen daies they are hatched by heat of the Sun, and the shell breaking, they thrust forth small Caterpillers like very small Worms, but coloured: at first beginning they are very hungry, and do nothing but devour leaves and flowers; especially of those herbs and plants where they were left in eggs. But I should maintain that they are not bred only one way; but all these waies: for though *Aristotles* doctrine seems to some not acute enough, that the Cabbage little Worm grows to be a Caterpillar; yet it is not against reason; for as nature from an egg, so from a worm she produceth a more perfect living creature, as perfecting, not as corrupting. For though the worm be not that it was before, (as is clear to sense) yet as much as can be perceived, it is both what it was, and is now somewhat more, for a Worm doth not dye, that a Caterpillar may be bred: but adds a greater magnitude to its former body and feet, colour, wings; to life remaining, it gets other parts, and other offices: so the off-spring of man (I use *Scaliger's* words) after some daies at first of a man in posse, is made a man actually; you must understand its generation, in which time the intellective soul doth not yet act; but it bears the same proportion to a man that shall be, as a Worm doth to a Caterpillar or Bee. So also *Penninus* derided the opinion of *Pliny*, when he writ that Caterpillers were bred of dew, yet all Philosophers with one consent agree, that the more imperfect small creatures are bred of dew. And not without cause. For the Sun by heating acts, being like the form, and the humour is like the matter. The Suns heat is different from the fire, for it gives life, or it preserves the souls in their likeness. For the dew hath the proportion and softness of the air, where *Theophrastus* alledgeth the affect of softness (in his Book of Plants) as proper for generating air. Also nothing is more nourishing than dew, by which alone some little creatures live: which also the divine Poet said; *How much doth dew lay up in the night!* Therefore as it is humour, it is the matter, as it is thin, it enters, as it is drawn by the Sun, and concocted, it is the fittest for generation; for the preparation of the form carries the matter along with it, and these going together it falls out that a living creature is generated. And it is not only an off-spring of dew, but the daughter of Butterflies, as we said, and as experience testifieth: and the greatest part of Caterpillers come from them, besides the Cabbage and Vine-creepers, few are bred otherwise. For these that the Greeks call *Imis*, are made of dew, or a humour shut up in webs and putrefying, especially when the wind is East, and the air warm, that hathness corruption. For then such a mighty army of them breaks forth in our Country, that we cannot truly say or think to many could be bred any way but from corruption. They are all glutonious devourers of herbs and trees: whence *Philip* the Parafite boails of himself in *Athenaus* in his Pythagorists for feeding on Thyme and Pot-herbs; *I am a Caterpillar.* *Martial* speaks to the same purpose, *Our garden will hardly feed a Caterpillar.* When their time of eating is over, they wander up and down here and there hungry, and by degrees growing lean with hunger, some within, some above the earth, seek for a fit place, where they are transformed into an Aurelia covered with a Membrane, and hanging by a thread, or into a bare case; if this happen in the midst of Summer, after 24 daies the shell breaking, a Butter fly presently flies out: but if Autumn be well spent, the Aurelia lasts all the Winter, and shuts out nothing till the heat of the Spring. Yet all Caterpillers are not changed into Aurelia's, but some are contracted (as Vine-creepers) and corrupt, from whom oft-times three blackish eggs fall, that are the mothers of Flies or Cantharides: when your Butter-flies copulate very late, they bring forth eggs (even untill the next Spring) that have life, (if you take diligent care of them) as it is usual in Silk-worms, whose eggs are sold commonly amongst the Spaniards by ounces, and pounds. *Theophrastus* distinguisheth the transformation of these Caterpillers rightly in these words, in his second of Plants: First, of a Caterpillar is made an Aurelia, and of this a Butterfly, then of that a Caterpillar again. But whether this Aurelian Chrysalis be a living creature or not, we shall dispute when we come to speak of Insects without feet.

## CHAP. V.

## Of the quality and use of Caterpillers; and of their Antidotes.

ALL Caterpillers have a burning quality and pilling of the skin, and raising of blisters. The most deadly is the Pine Caterpillar, yet they are all venomous, but least of all those that are smooth and without hair. The daughter of *Calina secundus*, being at *Basil* (saith *Gesner*) when

when she had devoured some Cabbage Caterpillers in the garden, after much vomiting, her belly swelled, the swelling troubled her many years, and no cure would be found for it. *William Turley* a Divine and a learned Physician, the happy father of one *Peter* who was born to give physick to Physick it self, prescribed a purging potion for a noble Woman of England, by the help whereof she vomited up a hairy Caterpillar, which being swallowed by negligence, had long afflicted her with cruel torments: yet we may remember (saith *Marcellus Virgilis*) that there are beats in the sea of the same names, and called Caterpillers, and are far from being poisonous; and amongst those men that live by the sea-side, are the last dish at their tables. We have shewed remedies against the mischievous and venomous ones before, in the Histories of Cantharides, Buprestis, and Pityocampes, for they admit of, and require the same cure. If you would have your garden or trees free from them, what webs you see hang on the naked boughs you must sweep off in Winter; for if you let them remain till the Spring, they will breed before you can remove them. In a short space they devour all green things, and consume the flowers: some appoint their trees with the gall of a green Lizard, or of a Bull, which as it is commonly reported, they cannot endure. The Countrymen use to lisse them with some brimstone and straw let a fire under the trees. The earth dug up under the root of the great bearing mast tree, if it be strewed in a garden, drives away Caterpillers, saith *Hildegard*. I should pass over the Remedy *Calumella* hath prescribed, as a shameless delusion of *Democritus*, did not *Pliny* and almost all the rest approve of it, who meddle with husbandry: the words are these:

But if against this plague no Art prevail,  
The Trojan Arts will do't, when others fail.  
A woman barefoot with her hair untied,  
And naked breasts must walk, as if she cried,  
And after Venus sports she must surround

Ten times the garden beds and orchard ground;  
When she hath done, 'tis wonderful to see  
The Caterpillers fall off from the trees.  
As fast as drops of rain, when with a crook  
For Acorns or Apples the tree is shook.

They touch not Plants that are besprinkled with Wine. *Theophrastus*. They presently dye with the smoke of the herb *Pfura Antio*. Hence it appears (saith *Silvius*) that the vulgarly called Scabious, is not *Pfura*. The Cabbage is free from Caterpillers, if it be fenced with Vetches. The Worms found in Fullers Twines, make them fall if they but touch the Cabbage Caterpillers. *Pliny*. Screw your Cabbages with Nitre, or salt earth, whilst it hath lost but three leaves, or throw it with ashes, and by the saltness of it, it will drive away Caterpillers. *Geopon*. *Palladius* in this matter prescribes the Fig-tree-ashes. If Crabs or river Crevins, were hanged up and exposed to the Sun for ten daies, they will drive Caterpillers from Pot herbs. *Cardan* out of *Palladius*. Others wet the seeds just before they set them, in the blood of a Caterpillar, or the juice of Marjoram, to free them from Caterpillers. A sea Onion set or hung in a garden, hinders the Caterpillers from breeding. Some low Mints, others Vetches, others Wormwood about their gardens to drive away Caterpillers. Some not without cause, have Coleworts and Garlic leaves in their gardens, by the same wherewith spread every way the Caterpillers fall down. *Palladius*, where any man may easily read of many remedies against them. If a Horse devour them, swellings arise, the skin of him grows dry and hard, his eyes hollow, saith *Hercules*, and he prescribes this remedy: You must take the sharpest Vinegar and Nitre three quarters of a pint, *Vitriol* a fourth part; mingle them and anoint the Horses body; be careful that it enter not into his eyes. Now we shall speak of the use of them in Physick, and in the Common-wealth. The Caterpillers web shall speak of like to like, the being drunk stops a womans courtes. *Math*. If it be burnt and put into the nostrils, it stops bleeding at the nose. The Caterpillar feeding on Privet, doth not only in a strange manner allure the Carp, if it be put on the hook for a bait, but also the dung of it put into the nostrils, presently helps the falling sickness in women, that proceeds from the Matrix, as I was told by a Midwife, that was very experienced, and worthy to be believed. The Caterpillers that are upon Sparges (in the opinion of *Hippocrates*) are very good for purulent wounds, especially if they be dried in the Sun, with the double weight of dauphail Worms, adding a little Anniseed, bringing them into powder, and insuing them in the best white Wine, adding a little water and honey after it. *Hippocras lib. de Suppuras*. prescribes those ordinary Caterpillers that are in troops to be given in drink against the Quinley. *Discor. lib. 1. cap. 90*. But unless they do profit by their secret quality, I think they are to be rejected for their open quality, especially in that disease. The Germans know that the hairy Caterpillar dried and powdered, stops the flux of the belly. *Nicander* also useth them to procure sleep: for so he writes; And *Jeremy Martin* thus translates him:

Scamp but with oft those worms that eat the leaves,  
Whose backs are painted with a greenish hue;  
Anoint your body with't, and whilst that cleaveth  
You shall with gentle sleep bid care adieu.

There are in prickly and hairy plants, such as the Nettle is, some downy and hairy Caterpillers, by tradition are held to cure children, when they cannot swallow their meat for straightness

nefs of their jaws. A Caterpillar that lives on Pot-herbs being bruised and anointed where a Serpent hath stung, is very good. *Avicen*. If you rub a rotten tooth often with a Cabbage Caterpillar, it will soon fall out of it self, saith the same Author. Caterpillars mingled with Oyl, drive away Serpents, *Discor*. If you anoint your hands or other parts with the same Oyl, it will keep them from being hurt by Waips or Hornets. *Atim*. *Pliny* citeth many superstitious things from the opinion of Magicians concerning the vertue of Caterpillars; which because I see they are call forth of the Schools of Divines, and I in my judgement do secretly disavow them, I will not repeat them here. They are meat also for divers Birds that we eat, and are useful for us, as namely Choughs, Starlings, Peacocks, Hens, Thrushes, to say nothing of Trouts, Robbin-red-brefts, Tenches, Carps, Pikes, which are easily deceived by a Caterpillar bait. And if you desire to know the waies of deceiving them; see *Terentius in Geopon*. who is there (that I may not overpass the Physick of the soul given by *Egypt* swarm'd and was even drowned with the deluge of them? Also amongst the *Romans* there was twice in one Summer such a cloud of Caterpillars, *Anno 1570*. that put them in great fear, for they left no green thing in their fields, but devoured all. Though the fruitfulness of the next year did blot out the memory of this grievous punishment, yet we may not doubt but it put many of them in minde to lead better lives, God grant that we may escape by being corrected in the punishment of other men. Let us think no creature of God to be contemptible; for God can, if he please, make the smallest the greatest judgement.

## CHAP. VI.

## Of the Whirlworm.

THE Greeks call it *Spondylus*; which *Gaza* interprets by *Vericillus*: *Pliny* changeth not the Greek word, but calls it *Spondylus*; the Germans *Eugerles*, as *George Agricola* teacheth. *Cesius* writes it was called *Tyner*, because it goeth diversely with sawed feet. The Northern English call it *Andever*; the Southern *Whirlworm*, that is, a Whirl or little hairy Worm with many feet: *Vincencius* calls it *Zuurolda*, because it hurts gourds: *Pliny* was in an error, that makes this a Serpent, since the kinde of life and reason it self numbers it amongst Insects. Should I here add the differences between *Gaza*, *Pliny*, *Theophrastus*, *Absyrus*, *Phavorinus*, and the Scholiast on *Aristophanes*, and *Erasmus*, concerning the nature and form of this Whirlworm, I should indeed trifle, and rather bring fire to quench this fire amongst wits, than water. But I rather collect out of their dissensions, that there are two kinds of Whirlworms; one about houses, another in the fields. For so *Aristotle* and *Absyrus* write. *Staphulinius* is like to the Whirlworms that are about houses. For saith he, your house Whirlworms copulate backward, and that in our sight, as Beetles do, the male coming upon the female, and they tick long in copulation. Away then with these triflings of *Pliny*, that would have these to be Serpents, which never copulate backwards: *Hesychius* and *Favorinus* that follows him describe them thus: *Men* say that the Whirl is like to an Insect called *Silphium*, making a stinking smell, if any one touch it. But *Aristophanes* and his Scholiast, paint it out thus: A Whirl is an Insect like to a Blond-fucker. *Camerarius* out of *Aristophanes* saith, a Whirl is a worm like a Leech, smelling most stinkingly. Whence I collect that there is a house Whirl like to *Silphium*, and smells so scurvily, which if you touch, runs away, and stinks for fear: for so *Aristophanes* hath it, *is alpin*. As the Whirl flying from you breaks wind stinkingly. In which verse I cannot but wonder that *Erasmus* (I know not by what Accitum) calls the Whirl *Telem*, *Chil. Adag. 3. cent. 7.* *Pliny* saith it is a very small body, and blackish, which if it be touched whilst it lives, and after it is dead, sends forth a most terrible smell. I confess ingenuously, that I never yet saw it nor know whether it be so by a contrary in our land or climate. Concerning the field Whirl, we read this in *Theophrastus* as *Gaza* hath interpreted, of small wilde creatures that are bred outwardly, that is not in the roots but without them, none of them will feed on roots except the Whirl, and that leaves none untouched, for it is the proper nature of this Insect. *George Agricola* a most learned Philosopher, writes thus of Whirls that feed on roots: The Whirlworm is found under the earth wrapt up near the roots, (which truly I could never observe) and hence it hath its name *Spondylus* from a little whorl or whirl. It is so long and thick as ones little finger, a red head, the rest of the body white, but that it is black above, where it swels when it is full. This plague of Orchards, which wants not feet (for it hath six feet) and doth not creep, eats up the pils about the roots of young trees; nor doth it at all forbear the roots of wilde Cucumbers, black Chamelcom, This Centaury, hogs Fennel, Birthwort, Briony, which no other Insect whatsoever will touch. This Whirl without all doubt is the Insect that *Mallotus* in his Book of his filthy Exorcisms brings in Whirl these words: There is, saith he, a certain worm which the Germans call *Engar* or *Ingar*, it liveth under the earth, is so long as ones middle finger, of a white colour, a black head, six feet, which by turning about, furrowing and turning up the earth, and eating the roots, maketh plants barren.

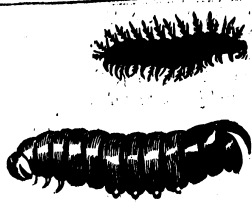
The third year after its generation, it breaks forth like flying Pismires, which like their predecessors stick about trees, and consume the fruit. Then they call it *Leuckeser*. In the Diocesis of *Mente* there were such multitudes of them, that all remedies were attempted in vain, only they were driven away by charms (for so *Mallotus* reports) *Cordus* also speaks of them, *Spondylus* are worms under ground, the Germans call them *Engar* or *Ingar*, called so from the Greek *Spina*.

The next year after they are bred, they are always transformed into May Beetles: they hurt roots much, and feed on all kinds, (be the bitter or venomous) of young sprouts, and trees roots, so that suddenly the whole plants, or at least the leaves shall fade. When the Gardeners see this, they dig about the roots of trees, and fetch forth these Worms and kill them. They do us most hurt in the moneths of April and May; in July and August many are found with us in marshy grounds, but there are no May worms but in Devonshire and Cornwall, and in the west of England. This we must note diligently, that it falls out with Insects as with Plants, that they change their colour with the climate and the earth. I have seen and I have by me a Whirl like a Caterpillar, that is of colour white from Ash-colour with a black head, if it be touched it collects it self into a ball, and it self resembles the Whirl in a womans spindle when they spin; whence it hath its name. It is benumbed out of the earth, and cannot endure the air; being wounded, a moisture comes forth of a pale black, wherewith one may write Letters as by enamelling. I have also a reddish Whirl that lives in the earth two foot deep, whose head is exceeding black, his mouth forked, the neck is reddish from yellow, the back is scarlet dye, the six forefeet are red-lead colour, the belly and all the body are perfect yellow, but that on both sides near the belly there are eight red spots, for ornament. It is so long as ones middle finger, and Summer coming, it is transformed into a Fly. I have seen one also clear coloured, with a thicker body, blewish from the middle of the back to the tail. But from the neck it appeared more grayish, the head and feet were yellow, the mouth was forked and red: whilst it is young the whole body is white, in age it grows yellow and blew, and it begins from the tail. It is, wonderful how it will carry its body long and broad waies by a waving motion, and yet never change the place, and in moving it often changes colours. For whilst it lies on the earth it is all white, but when it is forced to move, as if it were angry, it appears black and blew. It is altogether like to the great Worms in wood, as for the form of its body, but they cannot wreath and turn themselves round. I have seen a great Fly bred from this Worm that hath four wings. We have another that was found at the roots of Onions; and almost of the same magnitude with the black and blew one, with a green head, and fourteen feet; it hath horns, and a tail green from white: the whole body is green, white, blood red, noted with mingled colours: we call it Onion Caterpillar, we here represent the figures of them all. Now we shall add the opinion of *Joach. Camerarius* concerning Whirls, whose judgement I always commend. It may be, saith he, Whirls are

See *Joach. Camerarius*. those Worms that are found in the earth at the beginning of the Spring, that are almost white, or rather somewhat black and blew; which in Autumn become dark green, and with a shining skin, are coloured with a dark dye; their head is a light bay inclining to black, and something hard, that it can easily gnaw roots. Caterpillars soon rowl themselves up and die, and take other forms of Flies or Caterpillars. They are a finger thick, and an inch and half long, they have eight feet in the middle of their body toward the head. Our Country call them *Eardworms*. *Guilandinus* saith that Whirls are Worms so called, that like a Whirl they are round about the roots of trees. Also other Worms that are black, somewhat reddish, and have shell coverts with many feet, like the *Scolopendra* (and they seem to be of kind unto it, but that they are rounder, and not so broad) are found in the earth, and are dug out at the beginning of Summer, and roll themselves up the same way, as I said, if any one touch them. They also call these *Eugerles*, in Germany, that are yellow Worms under the earth with a black head, and near to that small feet, but have none in the rest of their bodies. These when they are dug up turn themselves into a round form, and being laid in the Sun they presently consume; for they live only underground and eat the roots of Plants. Who would not account all these Worms that turn themselves round, to be amongst Whirls? so far *Camerarius*. *Niphus* upon *Aristotle* saith that Whirls are a round







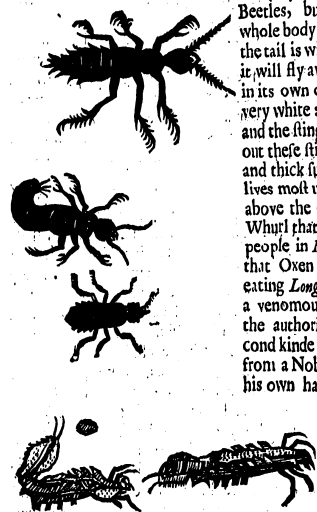
round kinde of Spider, in the middle of whose body a cavity is to be seen, that resembles a Whirl of a spindle. But this was his dream against the Philosophers minde, and he deceived us. What use there is of Whirls in Physick I never read, nor do I know. This is certain from the Prince of the Philosophers, that Owls and night Ravens hunt after them, as also Moles, as it is probable: *Cordus* holds them to be venomous. In *Egypt* the Scorpions that they call *Sibyles* eat Whirlworms, as *Alian* testifieth: but we shall pass from these to those called *Staphylini*.

## CHAP. VII.

Of a Caterpillar called *Staphylinus*.

*Aza* translates *Staphylinus*, a Parship, either by sleepy carelessness, or rather ignorance: but as it appears in the short expositions of *Nicander*, the ancient Physicians knew it not sufficiently. For the Scholiast writes that *Staphylinus* is a little creature like a Whirl: others say it is like the Spanish Fly. *Hippocrates* speaks once of it, but describes it not.

*Aristotle* treating of the diseases of Horses, calls it an incurable disease, if a horse swallow a *Staphylinus*, that is like to a Whirl. But *Abhyrus* writes thus: A *Staphylinus* is like to a Whirl that is about houses, but is greater; it is bred every where in the fields, and goes holding up the tail. Whence I perceive it were no hard matter to know a *Staphylinus*, if the home bred Whirls were not unknown to us. But that I may do my part and satisfy my Reader, I will produce two Insects with their figures, which I cannot tell whether they may be called *Staphylini* or not. But that they are not far different from them is, more than a conjecture. The first (as you see) is all shining black, not much unlike to Beetles, but the body is more slender and longer. The whole body is two fingers square or somewhat less in length, the tail is with two forks; which whilest it flies away (for it will fly away and run very swiftly) it lifts up, as it were in its own defence, and thrusts out like two short stings very white: but we never saw it sting or strike with them; and the stings are too small and soft to enter: when he puts out these stings in anger, it pours forth with them a white and thick substance, but softer than a moist ointment. It lives most under ground, yet it is often seen amongst corn above the earth. But I cannot say that it is like to the Whirl that *Aristotle* or *Abhyrus* speaks of. The country people in *Kent* hold this to be a venomous creature, and that Oxen are swollen by this poison as they are with eating *Long-legs*. It appears indeed that this *Staphylinus* is a venomous creature, not only from their report, but by the authority of *Aristotle* and *Nicander*. I received the second kinde of *Staphylinus*, a Worm of a wonderful form, from a Nobleman *Edmund Kniver*, exactly described with his own hand, and they are very common in *Norfolk* in



*England*. He hath a small head, of a dark colour, from red, almost round; the mouth is small and forked. Next the head, it hath three feet on each side; the two foremost of them are short (like to Caterpillars) the other four are almost of a bloody colour, four times as long. In the middle of the body under the belly it hath eight feet that are blunt, as also a Caterpillar hath. The tail is bunchy and forked with two hairs. We learn hence that both these kinds are naturally venomous, because two horses eating hay and swallowing them down were swollen all their bodies over, and died by them. In which disease it will not be useless to know *Abhyrus* remedy, that in the like case we may have it ready, and cure our horses. For if a Horse eat a *Staphylinus*, whilest he feeds on hay or eats, he presently calls him out again, by reason of the sharpness of the spines of it, and as it were Vipers blood. But presently he swells exceedingly, first therefore foment the swellings, largely washing and rubbing them with salt water very hot; then take vinegar Lees, and put into them fine linnen cut, and boyl this with water, and anoint him all over: but when he takes his physick, let him remain in a hot house, and a soft stall, covered

red well with clothes, and let a good fire be kept continually by him. Anoint him abundantly in the morning; then the third day wash him well with hot water, and dry up his sweat, then rub him in a close place, and having rubbed him, anoint him with Nitre. And fear not though his lips and eyes swell, (for it will so to fall out) for the Horse will certainly recover suddenly by this means, and be as well as he was before. But whether these be the same with *Staphylinus* of *Cordus*, or the *Cousiller* in *Franco*, let indifferent men judge. They are found in Orchards sometimes so long as ones little finger, and they make hillocks like to Moles, and there they sleep. They chiefly do mischief to Thyme and Elder, yet not so, but they hurt other plants and herbs also. If there be any that know any thing more certainly concerning *Staphylinus*, they are to be desired, for Physick and Philosophy sake, that they will not refuse to add their talent. So at last the natural History of Insects shall be enriched by their labours, and shall repay them not only great thanks, but also their part in a large increase.

## CHAP. VIII.

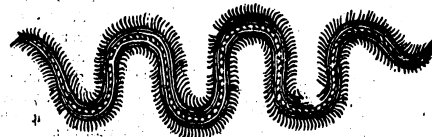
Concerning the *Scolopendra* and *Juli*.

THE *Scolopendra*, and *Juli*, and *Cheestlips* march in the last rank. They far surpass in the number of their feet, Caterpillars, *Staphylini*, and Whirlworms, and all kinds of Insects, whence they are called Many-feet by a peculiar name belonging to them. *Aristotle* calls this *Scolopendra*; *Theophrastus* *Sclopia*; *Dioscorides* (from the destruction of Serpents) calls it *Ophiolime*; *Varinus* and *Hesychius* call it *Amphipodes phaganon*; others, *Edi*, and some call it *Thousand-feet*, and *Many-feet*; the vulgar Greeks call it *Scolopetra*; the Latines also call this *Scolopendra* and *Sepa*, and *dirty-leg*, and *hundred-feet*, *thousand-feet*, *many-feet*; which three last names also they give to *Juli*. In Hebrew they call it *Gharum*; in Arabicks, *Alcampia*, and *Alamula*, as *Silvaticus* testifies; *Albertus* calls it *Almug*, *Alapna*; in the Polish Tongue, *Stomgrobak*, *Gastanka*; in the Hungarian Tongue, *Zunar*, *Hiragopap*, *Matzkaia*; in High Dutch, *Ein nassel*; in Italian, *Centopede Vermis*; in French, *Chenilles Millepede*; in English, *Scolopender* and *Many-foot*. In my judgement it differs as far from *Julus*, as a sea Lobster from a *Creech*. They are indeed like to one another, but these are always less, nor are they so mischievous when they bite, nor so venomous.

The great earth Scolopender is as long and thick as you have it pictured; the colour of the body is black from brown, and shining. To every incision a yellow little foot is joyned, that is, in the several sides sixty. It goeth forward and backward with equal ease. For it goes with the head forward, and with the tail forward; and therefore *Nicander* and *Rhodoginus* call it two heads. It hath the part between the head and belly not single, but manifold; whence it comes to pass that this kinde can live though it be cut in sunder. This Scolopender being provoked bites so sharply, that *Ladovicus Armarus* (who gave me one brought out of *Africa*) could scarce endure him to bite his hand, though he had a good glove on, and a double linnen cloth; for he frook his forked mouth deep into the cloth, and hung a long time, and would hardly be shaken off.



Another was brought from new *Hispaniola*, which had on the midle of the back a flame coloured line to adorn it; and a red side, and colour of the hair set it forth. It had feet like to hairs, and lifting it self upon them all, it ran very swiftly: this is worthy of the greatest admiration, that Nature having given to this creature a small head, yet it hath given memory to it, and the rule of reason, not in pints and pitchers, but in the largest measure. For seeing it hath feet innumerable as Rowers, and many of them are from the Rudder the head at a great distance, yet every one knows his own office, and as the head directs, so they all frame their motion.







*Conchob, Pandatarium, Satecollen*; in Spanish it is *Escorpion*, or *Alacram*; in Italian, *Scorpioni*; *Scurrisco*; in High Dutch, English, French, Brabant, it is called a *Scorpion*; in the Slavonian language, *Niedaradeck*; in Illyrium, *Jfir*; in Danish, *Wollocem*; in new Hispaniola, *Alacram*.

But that which hath a bunch on its back and draws the tail after it rolled up, *Silvaticum* calls *Algararar*. It is an Insect with a body of the fashion of an egg; as it were hooked all over; at the bottom a tail comes forth, joined with many round knots; the last as it seems longer than the rest, so that only is armed with a simple or double sting, and semerhing bended backward toward the end: it hath eight feet, and legs forked with claws, and strong pinners; it hath a head as the others have, lying hid in the top of its breast, wherein you can perceive very small and almost no eyes, that Authors do scarce mention them. All Scorpions have tails, or no tails. Some of the tailed Scorpions are fenced but with one sting, but others with two; yet they do not differ in kinde and nature. *Nicander* describes seven kinds of land Scorpions. The first is white and not deadly. The second (saith he) hath a red mouth, from

whose sting ariseth vehement heat, feverishness, and intolerable thirst. *Ælian* saith the same. The third is wan and blackish, whose sting causeth a shaking palse, and a Sardonian laughter, and vaith like to that of fools. The fourth is of a colour inclining to green: this is too soon as it hath stung a man, a cold and shivering possesseth him, so that in the hottest Summer he will suppose himself covered with frost. This kinde hath many knots between seven or nine, which is also the cause that he wounds so deep, by reason of the length of his tail. The fifth is black and blew, or of a pale colour, of a large stretched out belly, for it feeds on grats, and is unfatiable. It not only stings with the tail, but also bites with venom'd teeth. *Nicander* calls its poyson *Scorpion*, because a Bubo riseth on a man that he stings. The sixth is like to a Shore-sea Crab, yet not without a tail, but with a greater body and almost round, so that it represents a Crab with a tail. *Marthiolus* saith that he saw of this kinde some that were black, murrey and green in the County of *Arçima*, not far from the River *Sarcis*. The seventh is like a Grampel: also it hath claws greater than that; and this kinde is produced by Crevis on the dry grounds, that are entred into some hollow places to escape the Fishermen: in which places if they die or corrupt, these kinde of Scorpions grow from them: as *Ovid* most elegantly hath set it down:

Take off the claws of Crabs that use the shore,  
And from their bodies with earth covered oves,  
A Scorpion grows threatening with crooked sting.

*Ælian* calls this the flame-coloured, for it is like the Crab that becomes red with boiling. There is another kinde of Scorpion which we call *Rhaphis*, and the Arabians *Scorpion*; for *Nicander* and the Greeks never saw it: it runs swift of them all: it hath a tail for its small body that is very great; it seems to be pale, but the sting put forth is very white: *Rhaphis* calls it *Paravetis*; *Allochastis*, *Grati*; *Avicenna*, *Algararar*. It is found in the Eastern Countreys, especially in *Cox*, and in *Hasari*, as *Gordanius* notes. Philosophers say that the stings of other Scorpions infuse a cold poyson: the Arabians say that only this one, infuseth poyson that is hot. I saw one brought forth of *Barbary*, and we here give you the picture of it. The sting of all the tailed Scorpions is hollow, whereby they cast poyson into the wound: as *Ælian* reports l. 9. c. 4. To which *Pliny* subscribes, lib. 9. cap. 37. and *Nicander* in his *Theriacke*. Yet our *Galen* is of another minde; lib. 6. de loc. aff. c. 5. where he speaks in these very words almost, to those who ascribed a special quality of hurting or helping to humours or vapours. But the sting of the Scorpion deserves much more to be admired, which in a very short time causeth extreme symptoms; and that which is injected when it stings, is either very little or nothing at all, there appearing no hole in its sting: And indeed, when we see that from the teeth prick and stings of some creatures, fish or plants, there is solid poyson conveyed into the wound by them; what need we fly unto secret bladders, and perchance such as were never seen that lie hid under the root of their stings, such as fruitfull wits have rather invented, than solid judgments and those that were shadowy for the truth? As I said, they have all six feet, besides the claws that are their fore-legs, as crabs have, (Which I should more willingly call arms) some of them (if you look narrowly) are forked: their tail consists sometimes of 6, 7 or 9 knotted joyns: in the end of the tail is one hollow ring, two sometimes, (but that is more seldome). If it had its sting any where but in the tail (saith *Aristotle* lib. 4. *Histor.*) because it moves it self by steps, it were useless to sting withall: *Ælian* saith, that its sting is very small, and scarce visible: out of whose invisible pipe, if there be any such a venomous spirit, or milder humour is poured in by a wound made, that is scarce perceived or sensible. It walks side-waies as Crabs do, alwaies moving the tail ready to strike, that no opportunity may be let slip. The Males are the fiercer, slenderer, longer and more spotted on their bellies, claws and stings. The Females again (as *Avicenna* well observes) are greater, fatter, greater bellies, and milder. The poy-

Lib. 11. c. 25.

son of the Male is also more dangerous, as *Pliny* thought, the Female is more gentle; but all their venom is white, unless *Apollodorus* deceive us. It is apparent that they which have seven or nine joints on their tails, are the most curst: many have but six, it strikes athwart and bendingly. All of them have their poyson more violent at noon day, and in Summer, when they are hot with the Sun-beams, and when they are thirsty and are unfatiable for drink. The plague of it seems intolerable, and which with a heavy punishment destroys a man with a lingering death in three daies. Their stinging is alwaies mortal for maids, and most commonly for all women: and for men in the morning, before they have cast out their venom by some accidental stroke, and are new come forth of their holds. It is the property of Scorpions, that they will not sting the palm of the hand nor smooth parts, and no where unless they feel the hair. Scorpions, as *Pliny* suppoeth, will hurt no living creature that wants blood: which *Dr. Walsius* of *Turin* a most learned Physician hath proved to be false: for he saw, as he reported to *Pennius*, a Viper shut up in a vessel with a Scorpion, and they killed one another with mutual bitings and stings. And *Ælian* writes l. 8. c. 13. that they do fight and contend with Vipers, and all kinde of venomous Insects for their meat: *Gesner* saith it is certain that a Viper will devour a Scorpion: and from thence his bite will be the more grievous. Also *Theophrastus* writes that by the sting of Scorpions Serpents will dye, and not men. But *Galen* depending on experience, hath proved it to be false, and appeareth it for a lie. *Pennius* shewes the fraud of *Ælian*, relating lib. 6. c. 23; the wonderful fraud of Scorpions: but since I observed the same in *Italy*, I will maintain the truth of the Author, and free him of it. We know that the skill men have in that Countrey, they employ it all to escape from the Scorpions: whereupon they use sandals to defend themselves, and hang their beds on high from the ground, they place the props or supporters of their beds far from the wals, and set them in vessels full of water, and many other inventions they have to deceive or to destroy the Scorpions. But the Scorpions get up to the roofs of houses, and if they can finde any tyle broken they will remove it, and one of the strongest of their Captains, (trusting to the force of his claws) hangs down by this chink, and his tail hanging down, then another upon his back comes down as by a ladder, and takes hold by the others tail, and a third takes hold of the seconds tail, and a fourth by his tail, and so the rest, until such time as by links they can reach the bed, then the last comes down and wounds one that lies asleep in his bed, and runs back again by the links of his fellows, and so all the rest in order: shift away, unloosing as it were the chain, until they are all got up again upon one anothers backs. Also *Clem. Alexan.* 1. *strom.* makes mention of this property. But they are not all venomous, no do they hurt or sting all men alike. For they do not live in *Scily*, and if there be any there, yet they do no hurt; and therefore the *Phisii* lost their labour when they undertook to free *Italy* from this mischief that was a stranger to them, in hopes of gain. *Plin.* lib. 11. cap. 25. *Aristotle* writes of the same thing concerning *Pharus* lib. 8. *Histor.* c. 29. of the Island *Malta*, *Diodorus* lib. 4. cap. 3. of the Countrey *Noricum*, *Joseph. Scaliger*, *exerc.* 189. 5. where you shall come in no place but you shall finde abundance of them, and yet they either sting not at all, or else there is no danger unto man by it. But now in *Egypt*, *Sicily*, *Africa*, and *Albania*, they wound mortally, as we read in the Books of *Alexander*, *Pliny*, *Dioscorides*, *Strabo*. In *England*, *Scotland*, *Ireland*, and *Gales*, Scorpions cannot live, nor in the colder Islands more Northward. For though they cannot well bear the heat of the Sun by day, and therefore lie under stones all day; yet it seems they want no less heat in the night, for love whereof they come not only into chimbers, but get into feather beds, and lay themselves down sometimes close to those that are asleep. Men report many things concerning the Countrey of *Trent* set free from the deadly sting of Scorpions by the prayer of *St. Vigilius*. But it is at the Readers choice to take it for a Truth or for a Fable. In *Scythia* it is far otherwise, for there if a Scorpion sting a Man, a Hog, or any Beast or Bird, they are certainly killed. *Cardan* saith that such as wound mortally are seldome bred. But *Marthiolus* reckons up an army of desperate symptoms that happen there, especially in *Hernania*, by the stings of Scorpions, sometimes joyned with death. And *Ælian* l. 8. cap. 13. reports that in *Æthiopia* mens lives are not only endangered by the stinging of the Scorpions; but if they do but tread on their excrements, their feet blister, and they can hardly be cured. He calls these Scorpions *Sibritas*, they feed on Vipers, Blind-worms, Lizards, Spiders, and other venomous Insects: whence they are so forcible with poyson, and have a kinde of graduation (that I may use *Paracelsus*) in the use of it.

*Aristotle* speaks of some Scorpions in *Caria* that are very loving to strangers. (*Ælian* reports that this is about *Latmus*, a mountain of *Caria*, where they are sacred to hospital *Jupiter*, and do not sting any stranger; or if they do, they do them no great hurt, but they kill the inhabitants presently when they sting them. A Lion whensoever he sees a Scorpion flies from him as from an enemy to his life: witness *Physiologus* and *St. Ambrose* gives credit to it. Men say that such are never stung by Wasps, Hornets, or Bees, who are stung by a Scorpion. *Pliny*. Their Genera- Their Generation is twofold, commonly by Copulation, more seldome, (so far as we know of it) from *Paracelsus*. *Salmon*. Some maintain that they are not bred by copulation but by exceeding heat of the Sun. *Ælian* lib. 6. de *Anim.* cap. 22. amongst whom *Galen* must first be blamed, who in his Book de *ser. form.* will not have Nature but chance to be the parent of Scorpions, Flies, Spiders, Worms, Nature of all sorts, and he ascribes their beginning to the uncertain constitutions of the Heavens, Place, Mitter, Heat: but doubtless they do copulate, and they produce little worms alive (which I have

have been) they are white and like to eggs, and they sit upon them to hatch them. So soon as their young are brought to perfection by them, they are driven away by their young, as it falls out with Spiders also, (especially those are called *Phalangium*) and they are destroyed by their young ones in great numbers. Scorpions are fruitful creatures, for oftentimes they bring forth eleven. Some also suppose that they devour their young (namely *Antigonus*) but only one that is more cunning than the rest, which hides it self about the dams legs, and so escapes the danger of its sting and biting. This afterwards revengeth the death of all the rest, and kills its parents from above. They bring forth twice a year, namely in Spring and Autumn. The original of Scorpions from putrefaction is more rare, and it is many waies. For they are bred from Crevis corrupted, *Pliny lib. 11. cap. 25*; and from the carcases of the Crocodile, as *Antigonus* affirms, *lib. de mirab. hist. cong. 24*. For in *Archeolus* there is an Epigram of a certain *Egyptian*, in these words:

*The carcases of dead Crocodiles is made the seed,  
By common Nature, whence Scorpions breed.*

L. 10. c. 12.

*Aristotle* adds further, that from water Mints corrupting, Scorpions are bred. And *Kirander* and *Pliny* say they breed of Basil. An *Italian* that delighted much in the smell of Basil, a Scorpion bred in his brain, which afterward caused most vehement, and long during tortures, and lastly death. *Hollerius, lib. 1. cap. 1.* of his practise. *Gesner* heard as much of a French maid, as he testifies with his own hand writing. Doctor *Banchinus* second to none for Anatomy, reported to Doctor *Pennius*, that he hid Basil in a wall at *Paris*, and after a certain time he found two Scorpions in the same place. *Chrysippus* therefore not without cause, dispraised Basil to many men. There are some that maintain that if a man eat Basil the day he is stung with a Scorpion, he cannot escape death. Others say, that if a handful of Basil be bruised with ten sea Crabs or river Crabs, and be left in a place where Scorpions haunt, all the Scorpions will come about it, *Pliny lib. 20. cap. 12*. But *Discorides lib. 2. 135*, and *lib. 32. cap. 5*. saith that Crabs will kill Scorpions, if they be put to them with Basil. *Albertus Magnus, lib. 19. anim. cap. 18*. Some are of *Avicenna's* opinion that they breed of corrupt wood, and are made many waies.

The place conducteth much to their generation and production. For in *Hispaniola*, the *Canaries*, *Numidia*, *Scythia*, *Pescara*, *Barbary*, *Ethiopia*, there are such multitudes of Scorpions, that the inhabitants are oftentimes forced to forsake their habitations: *Ovidius, Thevetus, Leo Afer, Pliny*. The Country about the Lake *Arborea*, in the *East Indies* near the River *Esfamunum*, is so fruitful and so pestered with Scorpions, that the inhabitants not knowing what course to take, left the place to them. *Ælian lib. 17. cap. 40*. When you are two daies journey from *Susa* in *Persia* into *Media*, you shall light upon an infinite number of Scorpions, whereupon the King of *Persia* being toride that way, commands the Citizens three daies before to hunt the Scorpions, and assigns a very great reward for those that catch most of them. If he should not do so, by reason of the multitude of Scorpions lying under every stone, there could be no passage. *Ælian, lib. 15. cap. 26*. The *East Indies*, as *Agatharhis* testifies, and *Africa* also, breeds abundance and very great Scorpions, which also wound with their stings as the others in *Europe* do. The Scorpions of *America* are the smallest of all, yet the most venomous, next to those of *Africa*: their poison works so suddenly, that it immediately flies to the heart and kills the party that is stung. The people of *Noricum* near the *Alpes*, have in their Country many Scorpions, but (which is wonderful in Nature) they are all harmless, as *Scaliger* affirms. In *Pharos* also, and the Territory of *Avarium*, the Scorpions (as we said before) do no hurt. In some places of *Helvetia* (as about *Rappiwill*) there are found very small Scorpions, and innocent. *Gesner*. So it is also in some Countreys of *Germany*. In new *Hispaniola* there are a great many Scorpions, but not very venomous; there is some pain that follows their stinging, but it is not great, nor of long continuance, and men are more hurt by the stings of Wasps or Bees: unless it were so that the Scorpions were falling, or newly wounded. *Manardus*. But the Scorpions in the Island *Ferrata* (which is one of the fortunate Islands) and *Coptum* in *Egypt*, cause great pain and their Venome is mortal. In *Cassile* a Countrey of *Spain*, the country folk oftentimes whilst they plough up the ground, do finde innumerable Scorpions, clustered together like Pill-mires, where they lye hid all the winter. *Matthiols*. The colder Countreys have no Scorpions, as *Galeon*, *England*, *Ireland*, *Scotland*, *Denmark*, and great part of *Germany*, or if there be any there, they are not venomous. *Ælian* reports a wonderful thing concerning the Priests of *Isis*, which in *Copto*, a City of *Egypt*, where there are abundance of deadly Scorpions, they can tread upon them, and cast them on the ground, and yet receive no harm by them. Also *Pygias*, a people of *Africa* cannot be hurt nor stung by Scorpions: For when they come to any venomous creature, it presently becomes stupid as if it were charmed or struck dead; that it cannot move. Also all their Hogs, but not the black ones, (for if they be stung they die presently) are free from their stings. Lastly, a Scorpion nor any other venomous beast, doth not hurt a Stelio, an Ascalabotes, a Crab, a Hawk, as *Galen ad Pisonem*, and our friend *Gesner* have observed.

Their Food.

Their Use.

They live by eating the ground, and in some places they feed on Herbs, Lizards, Blinde-worms, Whirls, Beetles, and all poisonous beasts. *Ælian*. But he that shall tread on the excrements will have his feet blistered. The Hens, Ibis, Vipers eat abundantly of them, whence *Aristotle* calls the Viper *œmptuiger*. And they are not more fit for their food, than they are a remedy

for

for us. For being laid to their own wounds they made, they cure them, as is generally known. Their use is also a Scorpion bruised relieves the poison of a Stelio. *Pliny*. Some bruise them and drink Physick, them in Wine, calling away their tails. Others lay them on burning coals, and perfume the wound, and then throw the Scorpions ashes upon it. Some binde them to the wound, being bruised with salt, Linseed, and Marsh-mallows. Against the Stone, *Lanfrancus* his powder: Take 20. live Scorpions, close them in a pot with a narrow mouth, and with a soft fire burn them to ashes, which is a wonderful remedy against the Stone: A Scorpion torified and burnt to ashes and taken with bread, breaks the Stone of the bladder. *Autor ad Pisonem*. Three Scorpions closed in a new earthen pot, and covering it with a cover well luted with a fire made of Vine branches, bring them to ashes in an oven: the Doie is 6 grains with Syrup of *quinque radicum*: it wonderfully drives forth Stones of the kidneys. New Authors exceedingly commend the ashes of Scorpions amongst the remedies against the Stone, and the oyl of them injected into the bladder, and anointed outwardly. *Alexand. Benedictus, Aggregator* and *Leonellus Faventinus* out of *Galen* (*Eurp. 3*) teach us to burn three small Scorpions, and to give their ashes in Syrup, or a decoction, or some confection proper for it, to break the Stone. And *lib. 2*. he bids us to mingle them with fat, being calcined, and so to exhibit them; because otherwise the Patients would abhor the eating of them, wherefore they may be given without suspicion. That Medicament of *Abolans*, that *Arnoldus* praethes so much, is made of the ashes of Scorpions, as you may see in *2. Breviarii cap. 18*, as also the admirable Syrup of the King of *France* against the Stone, which is described in the same Book and Chapter. *Rondeletius, capite de calculo*, in his practise, maintains that a Scorpion is cold, and therefore to drive out the Stone we must use the compound, and not the simple oyl of Scorpions. *Matthiols* teacheth to make that compound oyl, *Commentar. pag. 1407. 20*. But before him *Lupinus Maris* made that after this manner. Take round Birthwort, roots of Gentian, Ciperus, Barks of Capers, of each 1. ounce, oyl of bitter Almonds 1. Kist, let them stand in the sun 30 daies; then add to it 15 Scorpions, and shutting the vessel again very close set them in the sun for many daies as before. Then strain the oyl and keep it for your use. Others prepare it thus: Take old Oyl as much as you please, put as many Scorpions into it as you can take in July (for then are they most venomous and fittest for this remedy) add to them white Dittany, leaves of Wormwood, Betony, Vervain, Rosemary, of each 1. handful, let them stum for a long time, then distil them in balneo in a Limbeck. It is called St. Bernards Oyl. It powerfully provokes urine. Anointed on the groin, it is prevalent against the bitings of Scorpions, how venomous soever. It drives out worms miraculously. *Brassavolus*. Oyl of Scorpions and Vipers tongues, is made a most excellent remedy against the plague; as *Criminus* testifies, 1. 7. *Manardus* saith that Oyl of Scorpions is now made with old Oyl, adding many medicaments thereto commended against poisons, and it is admirable in the plague, and against all venome. I know a man that having only this remedy, made no reckoning of the greatest plague; and had not only preserved himself but his servants also, whom he sent to visit people that were sick of the plague; and I know very many that escaped only by anointing themselves, having drank the most deadly poisons. So says *Manardus*. A liniment of Scorpions against the plague, and all poisons, is described by *Emmanuelus, lib. de cur. pest. cap. 12*. A Scorpion is good also against a wound given by a Viper, saith *Galen 1. de simpl. Samonicus* commends them highly against pains in the eyes, in these verses:

*If that some grievous pain perplex thy sight;  
Wool wet in oyl is good bound on all night.  
Carry about thee a live Scorpions eye*

*Abies of Coleworts if thou do apply,  
With bruised Frankincense, Goats milk, and Wine,  
One night will prove this remedy divine.*

If any one troubled with the Jaundies take Scorpions bruised in Wine, or Honey, *Galen* saith he shall quickly finde help. *Kirander*, against a Quartan ague, Quotidian, or Tertian, prescribes a Scorpion put into a glass of Oyl about the wane of the Moon, and kept there; and with this Oyl anoint the whole body on the joints, and the soles of the feet, and the palms of the hands, very well before the coming of the Ague. *Plinius secundus* saith, that a Quartan Ague, as the Magicians report, will be cured in three daies by a Scorpions four last joints of his tail, together with the gristle of his eise, so wrapt up in a black cloth, that the sick patient may neither perceive the Scorpion that is applied, nor him that bound it on. But let these superstitions pass, and we shall speak something of Antidotes against Scorpions.

First therefore of *Prophylacticks*. Magicians deny that a Scorpion can pass over if he be compassed in with a branch of Turbith: and the herb laid upon him kills him. *Pliny*. A smoke made with Brimstone, Galbanum, and an Asses hoof, drives away Scorpions. *Rhassus*. Take Storax, Arist-nick, Sheeps dung, six of the eise of Sheep, equal parts, dissolve them in Wine, and make a fume by the holes of Scorpions: If a Radish cut be put into their holes, they will not come forth. A Scorpion burnt is good; the liver of an Ass, Sappiracha, with Butter or Goats suet to make a fume. *Variganna* and *Diophantus* in *Cydon*. *Rhassus* commends the root of *Eleocarpus* carried about one. *Adrianus* writes of Monkshoe thus:

*Men say this Monkshoe hath a sovereign might,  
Who carry it that no Scorpion can him bite.*

26



Cure of the  
stings of  
Scorpions.

If a man annoynt his hand with an herb called *Paris*, or with the juice of the root, he may safely take a Scorpion in his hand, *Flaminio*. Grapes preserve men from the stings of Scorpions, as also Filberts carried in their Purles, *Aetius*. Also the seed of wilde Docks either drives them away, or their stinging is not mortall. *Discofoid*. Who also saith from the *Africans*, that Basil will do the like. Larks spurs, and wilde Campions also makes them stupid and astonish'd: The same Author. And saith he, they report, as long as any man hold Carduus in his hand, a Scorpion will not bite him, or if he do, it will not hurt him. The seed of Wood-sorrell drank, preserves one from Scorpions. *Avicenna*. If you lay *Solomon's Seal* under you, it keeps off Scorpions. *Isidorus*. And *Pliny* learned from the Inhabitants of *Africa*, that he that carries Radish-root, or Turnsole, or a dried beast like a Lizard about him, Scorpions will not hurt him: So Dittany in smoke, or wilde Mints, or Oyl of Scorpions annoynted about their holes, will keep them from coming into the Chambers, *Rhaphis*. But these things will kill them laid upon them: Radish-root chewed, broad leav'd Basil that grows by the water side, Mallows leaves, black Hellebore, (but the white will quicken them when they are dying, if *Pliny* may be believed) Scorpions grasse, Rose-root, Basil with a red flower, the spittle of a cholerick man fasting, *Rhaphis*, *Pliny*, *Avicenna*, *Democritus* in *Geopon*. To cure the sting and wound *Guthelmus de Placentia* prescribes this in general, namely, to give and apply inwardly and outwardly, presently, good Theriac; then the part affected must be cut, and an actual Cantery set to it, and the poyson drawn forth with Cupping-glasses. *Galen* bids binde the part above, and to cut off the parts affected. *Gal. 5. de loc. aff. c. 3*. But since that is a very hard and cruel remedy for the patient, I thought fit to write from the Ancients what remedies are cures for this wound. You shall first know the stinging of a Scorpion thus: The place is presently red and inflamed, and by turns, (as in an intermitting Ague) waxing cold, and the sick is sometimes better, sometimes worse. He sweats all over, his hairs stare upright, his whole body waxeth pale, his secretis swell, he breaks winde backwards, his eyes run with clammy tears and filth, his joynts grow hard, and he hath the falling of the Tuel, he fumes at mouth, he is drawn backwards by convulsions, and troubled with the Hickop, and sometimes great vomiting, he is quickly weary of labour, he is vexed and troubled with sense of horror, the outward parts of his body are cold, a pricking pain runs over all his skin, sometimes he thinks that hail falls upon him; for *Galen* asking one that was stung with a Scorpion, what he felt, (*3. de loc. aff. c. 7.*) he said he seemed all covered over and almost frozen with hail. *Aetius* adds, *pusillum*, or warts of the fundment like Ants; after these fainting, then swooning, and finally death. *Aetius* writes, that if the lower parts be stung, the groins swell presently, if the upper parts, then the Arm-pits. The wound being now known and viewed, and opened by section, and the generall cure we speak of applied, whereof Auctors are plentifull. *Galen* amongst outward remedies, reckons *Balsamum*, *tree Worm-wood*, or the juice of black *Mistle-berries* annoynted. Also he diversly commends the spittle of one that is fasting, and useth it as a Charm, *lib. 10. Simpl.* And he bids give inwardly the *Balsam* with *Womans milke*, the *Saphire stone* in Powder, *Alfa fatida*, *Scordium*, *Centuary* the lesse, *Rue*, *Castoreum*. Out of *Caston* the Physician he commends this: Take *Alfa fatida*, *Galbanum*, each alike, make it up with the decoction of *Scordium*, and round Birthwort. The Dose is the bignesse of a small Nut with hot water. Out of *Andromachus* he commends this, *lib. de Theriac*. Take *Theriac* two drams, Wine four ounces, mingle and drink them.

*Discofoides* outward remedies applied.  
Cyprus bruised and laid on.  
Anomum used with Basil.  
The Milk of the Fig-tree, or the juice of Sage  
dropt in, the Scorpion it self bruised.  
Sow-thistle beaten.  
Succory.  
Hawk-wood.  
Balm.  
Bull-flowr.  
Mull-berries.  
Larks-heels.  
The Hesh of a Fish called *Smaris*.  
The Barbel Fish cut in two.  
A Fish called *Lacerta* salted and cut in pieces,  
House Mice cut asunder.

Internall remedies from *Discofoides*.  
Cardamomum.  
Juice of Myrtilles.  
Bay-berries.  
Horle or Als dung.  
Seed of Campions.  
Mullens.

Chamæpitys.  
Scorpion-grasse.  
Turnsole.  
Calamint.  
Trifoly.  
Scordium.  
*Larus rustica*.  
Basil with Barley-flour.  
Wheat-meal with Vinegar and Wine.  
Marjoram with Vinegar and Salt.  
Alfa dissolved in Wine.  
Sea-water.  
Quick Brimstone with Rosin and Turpentine.  
Salt with Linseed.  
Galbanum made for a Plaister.

Other External remedies out of *Avicenna*.  
Marjoram laid on with Vinegar.  
Root of Coloquintida bruised.  
Reed roots bruised.  
The Shell of an Indian small Nut.  
Rams flesh burnt.  
Mummie four grains, with Butter & Cows milk.  
Decoction of Ameos.

Bran

Bran plaister-wise.  
Wine new boyled.  
Bark of Frankincense.  
The white Thistle.  
White Thorn.  
Pine kernels.  
Dates.  
Figs.  
Mountain Poly.  
Anacardi.  
Ashes of Kaly.  
Wheat Bran boyled with Pigeons dung.  
Salt of Urine.  
Oyl of Wormwood.  
Decoction of Nettles or Chamomile.  
But white Napha is the principal remedy, laid on hot. It is also good to suck out the venom with ones mouth, unless it be first ulcerated, and then to apply such things as inflame, as Pellitory of Spain, and Garlick.  
Seed of fowr Dock.  
The herb *Phalangium*.  
Daffadil seed and flowers drank in Wine, and also Bramble flowers so taken.  
Farnip-feed.  
Turnsole.  
Cypres boughs.  
Rue.  
Originum.

Lovage with black leaves.  
The Juice of Dog-fennel } drank.  
Sow-thistle  
The Decoction of Gentian-root.  
The Bark of Birthwort.  
Pennitoyall.  
A broiled Scorpion eaten.  
River-crabs raw and bruised, and drank with  
Asses milk.  
Mans urine drank.

Internals of the same Author.  
Juice of Worm-wood with Vinegar.  
Doronicum.  
Cinamon.  
Myrrhe.  
Wilde Saffron-leaves and fruit.  
Citron-feed.  
Mummie.  
Galbanum.  
Roots of Coloquintida and Gentian.  
The Indian small Nut eaten, and the Theriac  
of it.  
The root of Squills eaten, is admirable against  
the bitings of Scorpions.  
Locusts broiled and eaten.  
Juice of Onions and of Worm-wood.  
Juice of the lesser Centaury.  
Also new boyled Wine helps much.

#### The Antidote of Andoram, otherwise Braz, the King of Sicily.

Take Castoreum one dram, Scordium two drams, Coffmary one dram and half, *Alfa fatida* three drams and half, make it up with Honey. The Dose is one dram and half, or two drams with wine.

#### Another of the same.

Take Birthwort round and long, each one aureus, Cumin-seed three drams, *Alfa fatida*, Caraway, Rue-feed, each two drams, Castoreum four drams, make it up with Honey. The Dose is two drams with the hot decoction of Gentian root, or Birthwort, and wine; he gave also two drams of *Alfa fatida*, and sometimes three drams, Wood Laurell with Vinegar.

#### A Medicament of Andro a Greek Philosopher.

Take Rue-feed, live Brimstone, of each six aurei, Castoreum one aureus, *Alfa fatida*, one aureus and half, Pellitory of Spain, liquid Storax, of each one aureus, make it up with Honey. The Dose is half an ounce with Vinegar of the best wine.

#### Another excellent remedy.

Take Rue-feed one aureus, Castoreum half so much, Birthwort round and long, of each two aurei, roots of Gentian, *Alfa fatida*, of each eight drams, (or eight aurei) make it up with Honey. The Dose is one dram and half with pure wine. *The Electuary* of Zeno, or Diaruta. Take *Alfa fatida*, bitter Costus and sweets, each five aurei, round Birthwort, Agarick, each two aurei, Castoreum, Cinamon, Aloes, each three drams, roots of Orris, Sarcocolla, each one dram and half, long Birthwort, Gentian, each six drams, make it up with Honey. The Dose is three drams. He commends also the great Theriac of *Andromachus*, *Esdra*, Mithridate, and the Theriac diatefferon. The description of it is this, Take Gentian, Bay-berries, long Birthwort, Myrrhe, each alike, make it up with clarified Honey. The Dose is one aureus with hot water. Another against the bitings of Scorpions. Take seed of wilde Rue, *Ethiopian* Cumin, seed of Trifolie, Minianth, each alike, with Vinegar what may suffice, make a Confection. The Dose is one aureus. Another. Take Garlick, Nuts, of each one part, Rue leaves dried, *Alfa fatida*, Myrrhe, of each half as much, make it up with milk. The Dose is three drams. Another. Take Castoreum, white Pepper, Myrrhe, Opium, of each alike, make Troches. The Dose is three oboli with four ounces of wine. Another. Take Opoponax, Myrrhe, Galbanum, Castoreum, white Pepper, each alike, make them up with liquid Storax and Honey. Another. Take roots of Coloquintida, of Capers, Worm-wood, long Birthwort, wilde Succory, each alike. Give children one scruple, men one dram, it is of wonderfull vertue in this disease. Another. Take green grasswort juice with Cows milk, boyl it like to an Electuary. The Dose is two aurei; they say this helps much. Another. Take Opium, seeds of white Hen-bane, make it up with Honey, and mingle it with hotter things to temper it. If any man will have more from *Avicenna*, he shall finde it *Can. 4. Fen. 6. Tract. 3.*

#### Externall remedies out of Rhaphis.

The hot Oyl of Anacardi standing in the shell of an Egge, rubbed in, let the wounded part be

first bound, then let it loose, and anoynt it with Jesamin Oyl. The third day open a vein, but after meat and sleep. Also anoynt the place with Castoreum, Melanacardium, and Garlick, laying on a plate of lead anoynt with Quick-silver.

Sagapenum applied outwardly heats the wound, and a Weasels flesh laid over it.

Rub the place with a Topaz, and it will be cured.

The wound is bettered by rubbing a Pile upon it.

It may be cured with water from Radish-leaves, and Oyl of Mustard-seed, and Marjoram.

Scrapio writes that boyled Butter doth good.

#### Internals of Rhasis.

Sweat must be procured any way, by external and internal means.

Take Nuts, and Garlick cleaned, of each alike, bruise them.

The Dose is one ounce, and an hour after let him drink wine. Others adde to this a like quantity of dried Rue, Myrrhe, and Asia. The Dose is three drams with pure Wine.

Another. Take Nigella seed one part, Asia three parts, the Dose is one Trochis, with one ounce of wine.

Another. Let him drink strong Wine till he be almost drunk, and in the morning open a vein.

Another. Take roots of Coloquintida, bark of roots of Capers, Worm-wood, long Birthwort, Endive-seeds of each alike, make a powder. The Dose is one dram, for children one scruple.

Another Theriac against the stings of Scorpions. Take round Birthwort, roots of Gentian, Bay-berries, roots of Capers, Coloquintida, Worm-wood, Swallow-wort, white Briony, each alike, make it up with Honey.

Another. Take Myrrhe, Opoponax, Smallage, each one dram and half, white Briony, long Birthwort, Pellitory of Spain, each six drams, seeds of Rue, Gith, Trifoly, each three drams, Gum, Arabick, what may suffice, with Vinegar make Trochis. The Dose is one dram to one dram and half. Another. Take Cloves of Garlick cleaned five drams, Nuts ten drams, Asia one dram, incorporate them well. The Dose is two drams. Another. Take Gentian, Birth-wort, Myrrhe, bitter Costus, Rue, Castoreum, wilde Mints dried, Pellitory of Spain, Pepper, Gith-seed, Asia fasida, each alike, make them up with Honey. The Dose is one aureus with wine. Also the powder of Bringo root is good with hot water, and the powder of Dodder. Also one aureus of Napellus with water. Ivy and Polium with water are very profitable. If a fever come upon it, open a vein, Asles dried and drunk with wine is very helpfull. Thus much from Rhasis.

#### External remedies from Albucais.

Anoynt the place with Oyl of Ben, for many dayes, or Oyl of Jasmin, grinde Euphorbium with it, and Castoreum, or else Castoreum and Garlick ground together, with old Oyl for a plaister.

A Frog cut and laid on is very good. Take old Oyl one pound, Wax four ounces, Euphorbium one ounce, melt it in the Oyl, and anoynt the place with it.

#### Internals from Albucais.

Let him drink hot milk from the Cow with wine or Honey, Cinquefoil-seed, and lees of wine, are Theriac in this disease, as also Rocket-seed.

Hiera Anacardina against the stings of Scorpions. Take Pellitory of Spain, Gith-seed, bitter Costus, black Pepper, Acorns, of each ten ounces, leaves of Rue, Asia fasida, roots of Gentian, long Birthwort, Bay-berries, Castoreum, Cassia lignea, Mustard, Melanacardium, of each five drams, make up the powders with Oyl of Nuts, and with juice of Radish-root make it complet. The Dose is one dram daily, it causeth sweat. The brains of a hen in drink is very usefull.

Haly Abbas brings nothing that is new, but only takes other mens prescriptions. Concerning some Seals (amongst the hundred sayings of Ptolemy) and some fashions for Charms, both he and Kiranides make mention, but a Christian beleeves it not, nor are they worthy to be recorded by him.

Joannitum mightily commends a Plaister with Garlick and Butter, or to anoynt the place with Oyl of Peter, or pure juice of Leeks.

He prescribes to give inwardly of the pith of the greater Spurge four scruples, with warm water.

Rabby Moser prescribes one Sextula of Frankincense with Wine sufficient. Also he exhibits Pigeons dung dried, and finely powdered with Butter and Honey. The Dose is two Sextulas. Guil de Placcinia bids men give drie or green Marjoram inwardly, to drink it with mans Urine, and to apply it outwardly.

Constantinus 4. Pantech. lib. commends Hens dung, or the heart applied outwardly, and Pimpernel inwardly, taken with Wine, and powder of Gentian, Cinamon, Centaury.

Averrhois extolls Bezar stone above all, the Dose is the fourth part of an aureus.

Aristoteles mei dapsilatus dapsilatus, describes a kinde of Locust that is an Antidote against the Scorpion, which eaten presently cures the stings of Scorpions.

Scrapio affirms the root of the male Coloquintida bruised and laid to the wound, that it will take away the pain. He commends inwardly Wormwood, Lettice-seed with Garlick, Mumy two grains, with the decoction of Sampire, and leaves of Laserwort.

Orisibis approves of the Lilly roots, and leaves, bruised and applied, is also a Plaister of Verrain, and it is thus made. Take Verrain three ounces, Rosin six ounces, Wax, Pitch, of each two ounces and half, Oyl half an ounce, make a Plaister.

Internally he commends the ashes of River-crabs with Goats milk, or juice of Agrimony two ounces, with a draught of Wine, or the root of Dragons bruised, with wine.

Antius commends water Calamines and Nip, which some think to be so called because it is an Antidote against Nym, that is Scorpions. He saith, Garden-snails bruised and laid on draws forth the venom; he commends also upright and green Verrain, if it be laid on for a Cataplaim. Also Sheeps dung laid on with Wine. He makes also this Plaister. Take wilde Rue bruised with Vinegar one dram, Wax one dram, Pine Rosin three ounces, make a Plaister, it is admirable against the stings of Scorpions.

Internally, he writes that Garden Parsnips cure beyond expectation, be it eaten green or dried, and drunk with Wine. Take Castoreum, Laserwort, Pepper, of each four drams, bitter Costus, Spikenard, Saffron, juice of Centaury the lesse, of each two drams, clarified Honey what may suffice, mingle them. The Dose is the quantity of a Hazel-nut with Wine and water; it drives the Scorpions venom from any part, as Antius proved on himself. Agnita gives quick Brimstone bruised with a River-crab to drink in Wine.

Namus bids lay on Licharge or Silver presently upon the place stung, and he commends Brimstone, if it be taken the quantity of an Egyptian bean with eight grains of Pepper in Wine.

Anatolius commends this, to sprinkle Crows dung upon the stinging of the Scorpion.

Silvanicus out of Haly, commends a Waine, or the greater house Moult laid on, and out of Scrapio, Pewter powdered and drank.

Orphnus commends Coral in drink, and the stone called Scorpiodes laid on with a Garlick-head.

Others, Arsenic, Horatius, Zoroaster, Florentinus, Apuleius, Democritus, and other Authors of the Geoponica adde but a few things, to the Medicaments of the Antients, besides some old wives fables, and enchanted primes that are hurtfull to God and man. Pliny tells such a fiction, but no man can tell with what reason or credit: It saith he, one that is stung with a Scorpion get up upon an Asse, with his face toward his tail, he shall do well, but the Asse will suffer.

Myrsinus extolls the herb Flower-de-luce, well bruised, and then drank with Wine or Vinegar.

Quintus Serenus writes thus, and advileth,

These are small things, but yet their wounds are  
And in pure bodies burking do most harm, (great;  
For whom our fables inward do retreat,  
And men are figh'nt, they need some charm,  
The Spider and the cruel Scorpion  
Are wont to sting, witness great Orion

Shewn by a Scorpion, for Physicians small  
Flows mighty force, and therefore presently  
Lay on a Scorpion bruised, to recall  
The venom, or Sea-water to apply  
It hold full good, such virtue is in brine,  
And 'tis approv'd to drink your fill of Wine.

Pliny amongst outward means addeth these. Mustard-seed bruised, Pimpernel, roots of Chamaeleon, Sea-weeds, wilde Onions, Hares renner, Tortoise-gall, ashes of Hens dung, Colts-foot, and Mullen-leaves: It is exceeding good to purge the body within, very well, with the seed of wilde Cucumbers, and Bladderkin, and then to drink the juice of Lettice, and to drink the dried leaves and stalks in Vinegar.

Amni drank with Linseed.

Wilde Canin.

The third kinde of Canila.

Fennel-seed.

Root of Cyprus.

Great Saffron.

Cressies.

Yellow Camomil.

The tender stalks of green Figs.

Bay-berries.

In Wine.

The seed of Hyacinth with Southern-wood.

Seeds of Trifoly, and Rocket.

Four oboli of Agarick.

The juice of Jelly-flowers and Plantain.

The Ashes of River Frogs.

Chamaipythe.

The herb Nodia.

Seed of white Thorn.

Flame-coloured Campions.

Arnoldus Villanovanus hath these: Herb Trinity cures the wounds of Scorpions, and kills the Scorpions themselves. Let the sick drink one spoonfull of the juice of the root of Dwarf-elder with Wine, and it is an infallible remedy. Take of the roots of Cappars, Coloquintida, Worm-wood, long Aristolochia, Gentian, Bay-berries, Yellow Ben, White Briony, of each alike, make it up with Honey. The Dose is the quantity of a Nut with Wine. Another. Take seeds of wilde Rue, Cummin, Garlick, Hazel-nuts, of each one dram, leaves of dried Rue one grain and half, Myrrhe, Frankincense, each one grain, white Pepper, Opium, each three drams, Opoponax, Galbanum, of each half a dram, make it up with Honey. The Dose is the quantity of a Bean with Wine. John Arden an English man (he was in his time the most skillfull Chirurgion in England) after his long practice in England and France, he affirms he could finde nothing more true against the sting of the Scorpion, than to draw forth two or three drops of blood hard by

the wound, and presently to anoint the wound with the same blood. *Celsus* saith that those Physicians did some such thing, who were wont to keep the blood they drew forth of the arms of those that were stung. And this shall suffice for remedies against the stings of Scorpions.

If any man chance to be bit by *Rhais* Scorpions (which we called Bunch'-back) the first day a final pain is perceived, but the second, straightness, heaviness, and sadness is seized on the sick; the colour of the body is divers almost every hour, and changing from green, yellow, white, and red; whence it may appear, that all the humours are infected, the place burns by the confluence of pain, and humour; swooning follows, and trembling of the heart, an acute Fever, and swelling of the tongue, by reason of humours melted, and corrupting in the brain, and falling down on the roots and muscles of the tongue: sometimes also the urine is bloody, by reason of the acrimony of the venomous matter, and green choler is cast forth by vomit, also the guts are tormented with a sharp and vehement pain. Almost all symptoms fall upon the nerves that can happen to them. *Rhais bids cure all these things this way*: First, incision being made on the place, and cupping glasses applied, burn it with a strong actual cautery, then anoint the wound with the juice of wilde Endive, or with oyl of Roses, Barley water, juice of Apples, and with all cold things. If the belly be not soluble, make it so with a gentle Clyster, and the juice of Bitres, Nitre, and oyl of Violets, and let the patient take this Theriack. Take Opopanax, Myrrhe, Galbanum, Calloreum, white Pepper, of each alike, make it up with liquid Storax and Honey. The Dose is the quantity of a Jubebe: the part must be fumed with a piece of a millone heat, and sprinkled with Vinegar. Also foment it with water of wilde Lettice. The usual Theriack. Take the rind of the root of Capparis, root of Coloquintida, Wormwood, round Birchwort, Hepatica, wilde Dandelion, dried, each alike; make a Powder: the Dose is two drams; also sowre Apples must be eaten. For pain in the belly: Let him drink oyl of Roses, with Barley water, Citrals, Gourds, also give sowre Milk. For trembling of the heart: Let him take juice of Endive, or syrup of Vinegar, or syrup of Apples, with troches of Camphire, or sowre Milk the same way. If the wound be afflicted with great pain: Lay on a Cataplasim of Bole and Vinegar: for a defensive and for a sharp remedy, lay on Euphorbium, or Calloreum, Poly root drank with water, and a Rans flesh burnt, is profitable. Theriack, called *Halscarina*, first invented in the Province of *Halscarum*. Take leaves of red Roses iv. drams, Spodium ii. drams, Citron Sanders ij. drams and half, Saffron j. dram, Licorice ij. drams, seeds of Citrals, Melons, Cucumers, Gourds, Gum tragant, Spike, each j. dram, Lignum Aloes, Cardamon, Amylum, Camphir, each j. dram, most white Sugar, Manna, each iii. drams, with the mucilage of Fleawort and Rose-water, what may suffice, make it up. The people of *Halscarum* was wont to draw blood from the sick (saith holy *Abbas*) almost till they fainted; then they gave sweet milk to drink, and water distilled from sowre Apples. Also they gave sowre Milk in great quantity. Thus the *Arabians* speak of this pestilent kinde of Scorpions that *Nicander* and all the *Greeks* were ignorant of, and that was too common in the Countrey of *Halscarum*. Now we will speak of Spiders.

## CHAP. XI.

### Of the Name of Spiders, and their Differences.

The Name.

THE Latine name *Araneus*, or *Aranea*, is in Greek, *ἀράχνη*, from the slender feet it hath, or from its high gate, from the cobwebs it spins: Others call him *μυρμήκων*, or *Muscavicum*; *Kivamides*, *ἑσπερος*; *Hefechius*, *שֶׁכֶר*; the Hebrews, *Acabitha*, *Achar*, *Acabith*, *Semath*; in Arabic, *Sibth*, and *Pohith*; *Aldehab*, and *Aldeban*; as it is called by *Beluninfi*; the Germans call it *Spinn*, and *Banker*; the English, *Attercop*, Spider, *Spinner*; the Brabants, *Spin*, and French, *Araigne*; Italian, *Ragno*, *Ragna*; the Spanish, *Arana*, or *Taranra*; the Slavonians, *Sparavack*; the Polonians, *Paiaek*; the Barbarians, *Koatas*, *Kerjenati*; *Isidore*, l. 12. c. 12. saith it is called *Aranea*, because it is bred and nourished by the air: a twofold error: for if they live by the air, wherefore are they so careful to weave nets, and catch Flies? and if they were bred of the air, wherefore do they copulate? wherefore do they thrust forth little worms and eggs? but we will pardon the elegant Etymologist, because who makes a custome to play thus with words. There are many of these kinds, and all of them have three joyns in their legs:

A little head and body small,  
With slender feet, and very tall,  
Belly great, and from thence come all  
The webs it spins.

Now Spiders are venomous, or harmless; of harmless some are tame or house-spiders, those are the biggest of all; others live in the open air, and from their greediness are called hunters or wolves: the smaller kinds of these do not weave; but the greater sort begins his web very sharp and small by the hedges, or upon the ground, having a little hole to creep into, and laying the beginnings of his webs within, observing whilest something shakes the web, then he runs to catch

catch it. The venomous Spiders called *Phalangia*, are so venomous, that the place they wound will presently swell. These are of two kinds; for some are less, some greater; the less are various, violent, sharp, salacious, and going as it were rebounding, which as we read, are called *Julus*, or *Flatus*, or *Aper*; others are called *Oribates*, which are found especially on trees in mountains; they are called *Hypodromi*, because they live under leaves. *Gesperu*. It is a hairy creature, and breeds in the greater trees. The belly of it is moderately with incisions, that the cutting may seem to be marked by three. *Alianus*.

## CHAP. XII.

### Of Spiders that are hurtful, or *Phalangia*.

IN Italy they know not the *Phalangium*, (saith *Pliny*) It is of sundry kinds, one is great like to a Pismire, but much greater, with a red head; the other part of his body is black, with of *Phalangia* white spots running between. The Pismire kinde of *Actius* hath a smoky body, an ash-coloured and descript neck, and the back as it were adorned with stars. *Nicander* his *ἀράχνη*; *Actius* calls *Aras* the on Latines call it *Venator*; it makes a weak wound and without pain, but yet a little venomous: it is found amongst the Spiders webs, where (like hunters) it catcheth Flies, Bees, Horse-flies, Oxe-flies, and Wasps also, and (unless you will not credit *Lonicerus*) Hornets too, and it spoils all that the nets can take and hold: that this is the same with *Aristotle*; *Pulex* no reasonable man will deny. It hath a broad round volubilis body, the parts about the neck have an inci-

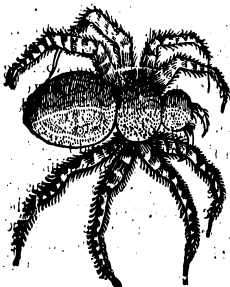


sion; and there are bred three eminences about the mouth. There is another *Phalangium* which *Nicander* calls *ἰσὶς*; *Actius* *ἰσὶς*; *Alianus*, *ἰσὶς* (from the likeness of it to the stone of a black Grape) it is round, and black, and shining, and globe-like, the feet are extreme short, as if they were imperfect, but it moves swiftly: it hath a mouth, but with teeth bred under the belly; and it moves with all the feet at once. Whether *Aristotle* Spider will bite, let the Reader judge. Truly it is not much unlike it, as *Grevinus* rightly conjectured. In this description, *Actius*, *Alianus*, *Plinius* do almost agree with *Nicander*. *Alian* put long feet amidst for small feet, and affirms, *Plinius* were the same creature. *Actius*, were the same, unless it were distinguished by med it to be only an African creature. Only *Pliny* after *Nicander* made mention certain white stars and lines, that are fat and transparent. Only *Pliny* after *Nicander* made mention of this, as if it had been unknown to *Aristotle*, *Galen*, *Actius*, *Alian*, *Avicenna*. The blewish coloured Spider is worse than all these, called by *Nicander* *midvers*; going on both sides with very long and tall feet: the Scholiast adds *ἄσος*, that is downy and high, not high downy, as *Lonicerus* translates it. *Pliny* saith hairy with black down, though I can hardly be induced to believe that the blewish *Phalangium* is hairy with black down. *Nicander* calls that *Phalangium* *ἰσὶς*, which others call *venator*, differing only from the red Hornet by want of wings, and is wonderful red. It is held far worse than the blew, though that by only couching doth communicate her venom, and break a crystal looking-glass (saith *Scaliger*) by running over the head, and another across that. The milder or ash-coloured, white on the latter part, is of the same colour, and that makes very broad nets for flies on the walls. *Plin*, and *Hermolant*. But as *Actius* saith, *Tetragnathus* is one kinde of *Phalangium*, with a broad body, whitish, with rough feet, it hath two little risings in the head, one upright, the other broad, that it seems to have two mouths, and four cheeks. *Alian* saith there is a great number of them about the River *Arxata* in India, sometimes deadly to the Inhabitants. In harvest time they are found amongst pulse, (when they are gathered with the hands) some small *Phalangia* are like to Bees

flies, of a flame-red colour; such are those the English call *Twigs*, by eating whereof cattle are oft-times killed; Phalangium breeds amongst cates, and in the Peach-tree, they call it *legionnaire*, by *Nicander* and *Actius*; *lucanarius*, by *Discofides*, because it boldly strikes the heads of those that pass by it, when it descends by a thread, or falls down without it. It is a little creature in the shape of a Butterfly Phalangia: it goes homily with the head alwaies nodding, and a heavy belly; it is of a long body and a greenish colour; it hath its sting in the top of its neck; if it light upon any man, it will especially wounds the parts about the head, as *Actius* witnesseth; it is nourished in the Peach-tree leaves, and hath wings like to some Butterflies: whence the Scholiast would insinuate that this kinde of Phalangium is winged, which no man hath observed yet. *Ponsetius* and *Ardynus*, deceived by *Rabbi Moses*, suppose it to be *Cranocleptes*, and the Tarantula; *Gilbert* an English man followed this error, in the Chapter of the Tarantula, *Sclerocephalus* or hard-head, little differs in fashion from the former; it hath a head as hard as a stone, and all the lineaments of its body like those little creatures that fly about candles. *Scorpion* is a long Spider, and varied about the head especially with some spots. There is also a kinde of Phalangium *Pliny* calls it the downy Spider, with a very great head; which being cut, they say that two worms are found, which bound to women before conception in a crows skin, will keep them from conceiving; and this virtue of them will continue for a year, as *Cecilius* hath left it written in his Commentaries. We call the last *Apulus*, and commonly Tarantula, famous by that name, from the Countrey of *Tarentum*, where they are most frequent; it borrows its name, we give you here the picture of it, that was bestowed upon *Phebus* by an Italian Merchant of happy memory; where if you paint the white places with a light brown, and the black with a dark brown, you have the true spotted Tarantula; I know no man yet that described it as it should be. *Ferdinandus Ponsetius* doth saie it to be only with six feet, and *Ardynus* thinks the same, and saith more, that it hath a long-tail. *Rhaphis* calls it *Tarantulus Syrius*, *Alucasis*, *Assari*, *Rabbi Moses*, *Aggonaspa*, *Avicenna*, *Schibis*, *Gilbert* an English man, *Taranta*; for he followed *Ardynus*, who made two kindes of Tarantula; one brownish as we have pictured; another Saffron coloured and clear, such as *Egypt* produceth.



Phalangium is not known in *Italy*, as we said out of *Pliny*, but now they are all almost found in the south Countrey, with great inconvenience to mowers, and hunters, as is manifest by daily experience. *Ponsetius* was wonderfully deceived, who in l. 3. c. 13. of the Scorpion, calls Phalangium a venomous Fly. It is a cruel creature (saith *Alexander ab Alexandro*) pestilent to touch. In summer when the sun is very hot, their sting is venomous, at other times not. In the coldest Countreys there are many Spiders, but no Spiders called Phalangia, or if there be any, they are free from all venom and infection. Tarantula lie hid in the chinks of furrows that are cleft with heat, and they strike and wound with their teeth mowers or hunters that are not aware of them; wherefore the inhabitants defend their hands and feet, when they go to mow, or to hawk or hunt, she makes her web like a net very silently, and all the little creatures she can catch, she provides for her supper. All the Phalangia bring forth in their net, (that they make thick) and they do as it were. She upon eggs in a great number, and when the young grows up it embraceth the dam and kills her, and oft times calls out the fire, if it can lay hold of him, for he helps the dam to sit, and they bring forth 300. *Bellonius l. sing. obs. c. 68.* observed little Phalangia in sandy grounds creeping up the Horses legs, (may be that is it the Germans call *Stein spinnen*) by whose continual bitings they suddenly fainted, and staggering continually they consumed. *Basilus* saith that there are ten kindes of Phalangia, but he describes them not. *Avicenna* (I know not out of what Book of *Galen*) divides the Spiders Phalangia into the Egyptian, the black, the bright red, that men call *Raches*, the white, Citron coloured, Grape coloured, Pismire-like, like *Cantharis*, Waspy, and mountainous. But both he, and all the Arabians describe them so foolishly (to say no more) that there can be nothing more



used to so great a matter. Lastly, to add all the kindes of Phalangia which we have seen or read of. I shall annex the *Cretian Phalangium*, you have here the picture of it exactly printed. It is of colour brown and ash-coloured, a smooth body, and hairy legs: near the mouth it is fenced as it were with two hooked prickles, with which it bites and wounds. It lives as the Spiders do by Flies & Butterflies, & makes nets to catch them: she laies eggs, and fosters them under her breast, whence the young ones are thrust forth, which suck under the dams belly, till growing elder they kill her. They dig a hole fit for the bigness of their body; for as they are not every where of one colour, so they are not of the same magnitude. They dwell in a cave two foot deep, and on the outside they cover it with straw that the dust get not in. All these venomous Spiders are naturally so, for they suck not their poyson from herbs, (as some think from their

their likeness) for they do not so much as taste of them, nor yet from the malignity of their food. For they feed principally on Flies, Gnats, Bees, and they suck no ill humours from them.

Grievous symptoms follow the bitings of Pismire Phalangium, for there follows a mighty swelling on the part bitten, the knees grow weak, the heart trembles, the forces fail, and oft-bittings of times death succeeds. *Nicander* saith that the kick sleep so deeply, that they are alwaies asleep Phalangia. at last, and are in the same condition as those are that are stung by the Viper: Histories relate that *Cleopatra* let one to her breath, that the might escape *Augustus* without pain, nor is the wound deadly unless it be wholly neglected. *Rhagium* makes a very small wound, and that cannot be seen, after it hath bitten: the lower parts of the eyes, as also of the cheeks wax red, then horror and fainting seize on the loyns, and weakness on the knees, the whole body is very cold & hath no heat, and the nerves suffer convulsion from the malignity of the venom. The parts serving for generation are so debilitated, that they can hardly retain their seed, they make water like to Spiders, webs, and they feel pain as those do are stung with a Scorpion. From the sting of *Asterion*, men seem wholly without strength, their knees fail them, shivering and sleep invade the patient. The blew Spider is worst of all, causing darkness and vomitings like Spiders webs, then fainting, weakness of the knees, Comas, and death. *Dysderis*, or Wasp-like Phalangium, causeth the same symptoms with the blew, but milder, and with a low venom brings on putrefaction. Where the *Tetrageraphis* bite, the place is whitish, and there is a vehement and continual pain in it, the part it self grows small as far as the joyns. Lastly, the whole body findes no profit by its nourishment; and after health recovered, men are troubled with immoderate warchings. *Actius*: *Nicander* denies directly that the ash-coloured *Tetrageraphis* can poyson one by biting him. The *Cantharis* like, or pulse Phalangium raiseth wheals, which the Greeks call *ovularia*, the minde is troubled, the eyes are wretched afe, the tongue stammers and fails, speaking things improperly, the heart is as it were moved with fury, and flies up and down. The *Vetch kinde* produceth the same milchiefs, and cause Horses that devour them, and cattle to be very thirity, and to burst in the middle. *Cranocleptes*, saith *Pliny*, if it bite any one, death follows shortly after. But *Actius* and *Nicander* affirm the contrary, and that the wound thereof is cured without any trouble almost at all. Head-aches, cold, vertigo, restlessness, and pricking pains of the belly follow, but they are all allwaged (saith *Nicander*) by fit remedies. *Sclerocephalus*, is like to this in form and forces and effects the same things, as also the *Scolecium*. We said that the downy Phalangium drives away barrenness, if it be carried about one, but whether it be violently venomous, I know no man that hath determined it. The spotted or Phalangium of *Apulia* doth produce divers and contrary symptoms according to the complexion of him that is wounded, and his present disposition. For some laugh, some cry, some speak faulteringly, others are wholly silent; this man sleeps, the other runs up and down alwaies waking; this man rejoyceth, is merry and moves up and down, that is sad, slothful, dull; some think themselves to be Kings, and command all; some are sad, and think they are in captivity, and fettered: lastly, as men drunk are not of one quality: so are these that are mad, some are fearful, silent, trembling; some are bold, clamorous, constant. This is common to them all; to delight in musical instruments, and to apply their munes and bodies to dancing and leaping at the found of them. Lastly, when by continuance of the disease and the vehemency of it, they seem next unto death, yet when they hear musick they recollect their spirits, and they dance with greater cheerfulness every day. These dancings being continued night and day, at length the spirits being agitated, and the venom driven forth by insensible transpiration they grow well. But if the Musicians upon any cause do but leave off playing, before the fuel of this mischief be spent, the sick fall into the same disease that they were first oppressed with. We must admire this moit, above other things, that all those that are stung with the Tarantula, dance so well, as if they were taught to dance, and sing as well as if they were musically bred. (In *Italy* it was first invented, and custom hath taken it up to call such as are bitten, Tarantali, or Tarantulali.) *Cardanus* against faith and experience, denieth that musick can restore any that are bitten; yet we heard the same thing fell out at *Basilis*, from *Felix Platerus*, *Theodore Zwingerus*, our most famous, and dear Masters, and we read the same in *Matthiolus*, *Bellonius*, *Ponsetius*, and *Paracelsus*. And if the sweet musick of pipes could help mad horses, and pains of the hips, (as *Aclepiades* writes) why may it not help those are stung with a Tarantula? Somewhere are that assign to this disease, some I know not what small deity, as superintendent over it: they call him *St. Viti*, that had formerly great skill in singing, he being called upon and pacified with musick, as he is the patron of musick cures them, so that men superstitiously impute that to him, which they should do to musick and dancing. *Bellonius* reports that the Cretian Phalangium induceth the like mischiefs, and the pain and wound of it is also cured by musick. It is no wonder the Ancients described not these two kindes of Phalangia, because they knew them not, nor did the shew the waies how to cure their stings. *Discofides* writes thus of the common bitings of the Phalangia. The symptoms that follow their bitings are commonly these: The place stung looketh red, but neither swells, nor waxeth hot, but it is something itroit; when it grows cold, the whole body quakes; the hams and groins are stretched out, there is a collection made in the loins, they are often urged to make water, and they sweat with very great pain, and labour to go to the stool, and cold sweat runs down every where, and tears trickle down from their





The decoction of Cyprus Nuts, especially with Cinamon and River-crabs juice, and juice of a Goose : Also the decoction of Sparagus with Wine and water.

*Another.* Take Birthwort, Cumin, each three drams with hot water : *An approved Theriac.* Take Nigella seed ten drams, Daucus, Cumin, each five drams, Cyprus roots and Nuts, each three drams, Spikenard, Bay-berries, round Birthwort, *Carpobalsamum*, Cinamon, Gentian, seeds of Siler Montanum, and of Smallage, each two drams, make a Confection with Honey ; the Dose is the quantity of a Nut with old Wine. *Confection of Asa.* Take *Asa foetida*, Myrrhe, Rue-leaves, each alike, make it up with Honey ; the Dose is one or two drams with Wine.

*Out of Abjyrus Lulus, Albucasis, Rhafis, Ponsatus.* Take white Pepper thirty grains, with a draught of old Wine, take it often. Also Thyme is given in Wine. *Abjyrus.* Drink upon it one Spoonfull of Wine distilled with Balm. *Lulus.* Take dry Rue, Costus, wilde Mints, Pellitory of Spain, Cardamum, each alike, *Asa foetida* one fourth part, Honey what may suffice, mingle all, and make it up ; the Dose is the weight of an Hazel-nut in drink. *Albucasis.* A Hens brain drank with a little Pepper in sweet Wine or Posca. The decoction of Cyprus-nuts with Wine. *A Theriac against the bitings of Phalangia.* Take Tartar six drams, yellow Brimstone eight drams, Rue-feed three drams, Castoreum, Rocket-feed each two drams, with the blood of the Sea-tortoise, make an Opiate ; the dose is one dram with Wine. *Another.* Take Pellitory of Spain, round Birthwort, each one part, white Pepper half a part, Horshound four parts, make it up with Honey ; the Dose is one dram. *Another.* Roots of Capers, long Birthwort, Bay-berries, Gentian root, each alike, drink it with Wine. Or drink Diacla with strong Wine, and Cumin, and Agnus Castus seed, *Another.* Take Nigella seed ten drams, Daucus, Cumin, each five drams, wilde Rue-feed, Cyprus Nuts, each three drams, *Indian Spike*, Bay-berries, round Birthwort, *Carpobalsamum*, Cinamon, Gentian root, seed of bituminous Trifoly, Smallage-feed, each two drams, make a Confection with Honey ; the Dose is the quantity of a Nut with old Wine. *Rhafis.*

*Out of Pliny, Celsus, Scaliger.*

It is good for those that are bitten by the *Phalangium* to drink five Pistimires, or one dram of the Roman Nigella seed, or blackberries with Hypocistis and Honey. Also Marsh Smullige and wilde Rue; are peculiar against the bitings of the *Phalangia* : Also the blood of the Land Tortoise is good, juice of Origani, the root of Polymonia, Vervain, Cinquefoil, the feed of Garden Onions, all the kinds of Houleek, roots of Cyprus, Turnsole with three grains of juice of Ivy-root, in Wine or Posca ; also Castoreum two drams, in Mustum to cause vomit, or in juice of Rue to stop it. Also Agnus Castus seed two drams : *Apylodorus* that followed *Democritus*, calls a kind of herb *Crocides*, by the touch whereof *Phalangia* die, and their force is abated ; the Mar-rush-leaves next the root, eaten do profit. *Pliny.* Take wilde Vine-berries, Myrrhe, each alike, drink them out of one Hemina of sod Wine. Also the seed of Radish, or root of Darnel must be drank with Wine. *Celsus.* Rue amongst many other remedies that are proved, one Antidote is due to *Scaliger*, who was the ornament of our world and age ; the form of it is this, Take true round Birthwort, Mithridate, each two ounces, *Terra Sigillata* half an ounce, Flies living in the Houers of *Nepellus*, 22. Citron juice what may serve turn, mingle them. For faith he, against this venome or any other bitings of Serpents, Art hath scarce yet found out so effectual a remedy. *Scaliger.* Juice of Apples drank, or of Endive, are the Best against the bitings of the *Phalangium* : *Petrus de Albano.* These are the most approved outward remedies. Five Spiders pured in Oyl and laid on, Alles or Horse dung anyointed on with Vinegar or Posca : Take Vinegar three sextarii, Brimstone a sixth part, mingle them, foment the place with a sponge, or a bath, the pain being a little abated, wash the place with much sea-water : some think that the stone Agates will cure all bitings of the *Phalangia*, and for that reason it is brought out of India and sold dear. *Pliny.* Fig-tree alhes with Salt and Wine, the root of the wilde Pance bruised, Birthwort and Barley-meal impasted with Vinegar, water and Honey, and Salt for a fomentation. Decoction of Balm, or the leaves of it made into a Pultis and applied ; we must constantly use hot Baths. *Pliny.* Open the veins of the tongue, and rub the places swolne with much Salt and Vinegar, then p. ooke sweat diligently and warily. *Vigeti.* The practical men mightily commend the root of Panax Chironia. *Theophrastus.* Anyoint the wound with Oyl, Garlick bruised, or Onions, or Knot-grasse, or Barley-meal with Bay-leaves, and Wine, or Wine Lees, or wilde Rue, lay it on with Vinegar for a Cataplasme. *Nonus.* Take live Brimstone, Galbanum, each four Denarii, *Lybian* juice and Euphorbium, each alike, Hazel-nuts pild, each two drams, dissolve them in Wine, and with wine make a Cataplasme, also inwardly it helps much. Flies bruised and laid on the part affected, Also a Barbel heals the bites of a venomous Spider, if it be cut raw and applied to it. *Galen.* Anyoint all the body with a moist liquid Oynment with wax. Foment the part affected with Oyl, wherein bituminous Trifoly hath been foked, or with a Sponge and hot Vinegar, very often. Make also a Cataplasme of these that follow, namely, with Onions, bloudwort, *Solomons* seal, Leeks, Bran boyled in Vinegar, Barley-meal, and Bay-leaves, boyled in Honey and Wine. Make them also with Rue, Goats dung with Wine, Cyprus, Marjoram, and wilde Rue with Vinegar. *Asclepias* in Plaster. Take feed of wilde Rue, Rocket-feed, Staves-acre, of Cenchrus, Agnus Castus, of Apples, Nuts, of leaves of Cypress, each alike, bruise all with Vinegar, and with Honey make a Plaster. *Antius.* Lay the decoction of Lupines upon the place affected, the Eschar being first taken away, then anyoint

anyoint it with Goose grease, wilde Rue, and Oyl in the hot Sun or by the fire, or make a Cataplasme of Barley-pap, and broth of Lupines. *Orbasius.* An *Indian* Hazel-nut smeared on, cures the bitings of the *Phalangia* : Oyl of Worm-wood, and the milk of Figs anyointed on, doth prove very much. *Avicenna.* Of hot althes, Figs and Salt with Wine make a Plaster : Also it is convenient to hide a great boll in sand or hot althes, and by that means to sweat with Antidotes. *Rhafis.* Goats dung must be dissolved with the Pulesties, and laid to the part affected. *Kiranides.* Lay on often cold Iron. *Petrus de Albano.* Foment the place with juice of Plattein daily. *Hildegard.* Oyl of artificiall Balsam is exceeding soveraign. *Eunymus.* A Fomentation of the branches and stalks of Malterwort must be continued, or let him drink Vinegar with Wine, and lay it on outwardly, first bruised. *Turneiser.* Bruise Rue with Garlick and Oyl and lay it on. *Celsus.* You shall lastly finde divers such remedies in *Pliny* and *Discorides*, so digested into order, that they rather require our Silence, than our curious, and unskillfull repetition. Of this therefore thus far.

Now let us see  
That Spider with which our mindes well agreee  
Who sits within the midst of's Net to watch  
Where the East winde blowes, it shakes, he darts catch  
Flies that but touch his Web, none can him match.

### CHAP. XIII.

#### Of the tame or house Spider.

Amongst Insects, though many may be found (as *Pliny*, *Calins*, *Cris* the second, out of whom we have serched many of these things, say rightly) that may exercise great wits, yet the nature of Spiders is worthy to be admired in chief, and is apparent by their curious working, as any reasonable man will judge. *Aristotle* the greatest diver into Nature, saith that this is the most magnificent, and wisest of all Insects. And *Solomon* himself at whose wisdom all the world is amazed, amongst those four Animals that exceed Philosophers by their knowledge, reckons up the Spider, dwelling as he saith in Kings Palaces, and weaving Webs that man cannot do the like. The Poets saign that the Spider was once a *Lybian* Mayd, that *Minerva* had taught to work with the needle, and weaving all curious artificial work : But she was grown so proud of this skill, that she denied that ever she learned this of *Pallas*, and she proceeded so farre in arrogancy, that she boldly challenged *Minerva* to work with her in all these Arts : Wherefore *Pallas* disdainig her pride, came, and sharply rebuking the Mayd for her insolence, brake all her fine wrought works with a Wand : At this the Mayd was fore abashed, and thought to have hanged her self ; but the Goddess pitying the poor Maids condition, would not suffer her to do so, but as she hung by a very fine Cord, she changed her shape into a Spider.

*Pallas* was angry, and in wrath she said  
Tee live and hang, thou proud and haughty Mayd,  
And that thou mayst still suffer 'tis my mind,  
The same Law last for thee and for thy kind.

But they that interpreted this a Fable or a History, say that *Arachne* found out the art of spinning, (owing, and weaving henn, taking pattern by the Spiders. And this needs not seem strange to any man, since the Swallows found out the Art of plaistering, and for Oculists, Eagles for building, *Hipporamus* for letting blood, *Ibis* for giving Glysters, Goats for Antidotes, so Tortoises, *Wicels*, Storks have instructed us.

To praise the Spider as I ought, I shall first set before you the riches of its body, then of the praise of its fortune, lastly of its minde. If you consider the matter of it, it is light, partaking much of the house Spider taken from the bo-  
Air and Fire (that are the most active and noble Elements) but it hath little of earthly dregs from the bo-  
and gravity. Consider the figure : it is wholly round and orbicular, or at least Ovall, that dy of it  
is next unto it. The substance of it is thin, transparent, and makes reflexion of beams most  
against the light, it shines all through like a Chrysolite, and makes reflexion of beams most  
gracefull to the eye. It hath the same colour that *Svid* writes that Lovers have, that is, pale,  
and when she sticks aloft with her feet cast every way, she exactly represents a painted Stare,  
As if Nature had appointed not only to make it round like the Heavens, but with rays like  
the Stars, as if they were alive. The skin of it is so soft, smooth, polished and neat, that she  
precedes the softest skinn'd Mayds, and the damiest and most beautifull Strumpets, and is so  
clear that you may almost see your face in her as in a Glasse ; she hath fingers that the most  
gallant

gallant Virgins desire to have theirs like to them; long, slender, round, of exact feeling, that there is no man, nor any Creature that can compare with her: she hath feet, not numberless, as the Scolopendra, nor is she without feet, as some Insects are, nor hath only six feet, as those that want wings have, but eight feet; which number is next to the most perfect number, as all men know. These Legs also are made in a sequitertial proportion, which is most admirable and venerable; so that though the latter feet be always shorter than the former, yet they hold still their proportion. Many Philosophers who hold that Spiders are blinde, are blinde themselves, for were they blinde, how should they make choice of those places that are most convenient for to pitch their nets, and who should lead them to fallen one third to another, and should know how to mend their Webs when they are broken by accident? when as also the same and familiar Spiders will come from a distance, to catch a Flye that toucheth but the sides of their threads; they are the more bold to pursue them and will take them as it were from hand to hand, as we have often seen. Truly they are blinde at noon-day and understand nothing what they say, that Spiders are blinde. In this Spider there is no payfon nor hurt, for if it bite it is without harm, and it is rather tickling then painfull. Also their very Carcafes, and their bodies, their eyes, their excrements, are good and usefull for many diseases, as we shall make it plain enough when we speak of their use. I know not what it was that made *Pennius* so frightened when he thought of eating them; for he knew a Noble *English* Lady, and *Phaerus* a Physician, that did often eat them without any hurt at all. For the truth is, Spiders are free from payfon, and are very good for ones health. But because it seems so horrid a Creature to some people, that the very sight of it makes them fly from it, I rather attribute that to their melancholy apprehension, tenderness and distemper, than to the ill form of the Spider. Nature hath used no lesse elegancy and bounty in the Spider, then she hath done in the Butter-fly, and Flye; and it is no light disease of the minde to disdain so beautifull a work, and to be afraid of a Creature that weaves so curiously. Lastly God hath given a wonderfull disposition and nature of the skin to so wonderfull a body; for it doth not only once a year (as Vipers do) but every Month if she be well fed she change her skin, and recovers a new one that is more curious. Also it is of so excellent a temper, and so frugal in its diet, that in a wholesome place, where she can get any provision, she will live always. I think that to be the chiefest good amongst the goods of Fortune, or rather Fate, that they carry the matter of their Webs in their belly, and they are so well stored with it, that a Spider can draw forth innumerable threads and weave them, and catch if need be, a hundred Flies, and have Nets enow to wrap them in. And though they have not meat in a Granary as *Pismires* have, nor ready and growing up, as Bees have, but they live only upon food they light upon by chance, yet by Gods providence the prey comes flying by that sustains them, and oft times they grow fat with plentiful dishes that they take by hostility. Further, I should think it no small part of good Fortune given to the Spider, that when she is satisfied with the troublesome fare of the Court, yet she never hath the Gout. You have heard that *Solomon* of old assigned her a place in Kings Palaces, that she might be a pattern to his Courtiers, to labour, to be ingenious, wife, frugal, and virtuous. There beginning her Webs she works with hands and feet, and never need to goe hawkling for Flies, she feared no assaults, no treachery: and briefly this most wise creature did bear rule in the great Palace of that great King. After him arose bad Princes, that were idle, followed ill counsel, that came to ruine; it is hard to say, how hardly they used the poor Spider, and commanded her to sweep her down with beams and poles; as if she had been a night-robber, and to tread her under foot, and to kill her. Presently Furies ran and swept down and spoyled all those learned works that had been wrought, so that she could hardly escape the quick-fighted beesomes of those lazy devils. She was most miserable now, left all alone in so great abundance, and in so large houses, she could not finde one corner to be in. And by the Kings example, the Nobles and rich men drove out this Mistress of labour and vertue, and they would not suffer one third to remain, that was a Token and Ensign of her great wisdom. She when once she went abroad to travell (as the Fabulist wittily saith) the Gout by chance came to keep her company, though she could hardly hold pace with her, but with great toil. When as now they had travelled one dayes journey, at night they took counsell to try their Hosts, but they were of different opinions. The Spider going into the City, got into the house of a rich Citizen, and so soon as she began to work and to spread her Tapestry and hangings, (by the example of the bad Kings) he forthwith hates her, and drives her out, and the same night he expos'd her to the rain and open air. But the Gout being lame, when he could go no further, got into the sick house of the Town, and could scarce in-treat to be harbour'd in the poorest Cottage there; and when she lay down, she found misery enough; she had for supper brown bread that her stomach rege against, and a little herbs, scarce any salt upon them, and water was fetcht from the next pond, in an earthen Pitcher to quench her thirst; being thus entertained, she required a bed to ly on, she could get none but straw or the planks to ly upon, and so she lay down in pitifull misery, lamenting and sighing: But alas how wretched a thing it is for tender limbs, and that cannot endure to be touched (as saith *Hippocrates*) to ly upon such a hard bed and pillows. The next morning the Spider and the Gout met again; the Spider complained terribly of the incivility and rudeness of the rich Citizen, and the Gout on the other side complained of her Hosts poverty and poor fare, showing

The praise of  
the house Spi-  
der from the  
goods of For-  
tune.

the black and blew, marks the hard lodging had made in her skin; and when they had a while taken deliberation about it, they both agreed upon this, that the next night they would change their host; that the Spider should go to the poor cottages, and the Gown to the Kings palaces and rich mens houses: the Gown not unmindful of this agreement, went to a very rich mans house, and lay down at the feet of a very well fed Miller, that was very rich, and so soon as this kinde host perceived her, with what humanity, embracings, and cheerfulness did he entertain her! down pillows were laid under her, all the stools and chairs in the chambers are filled with the best feathers, and cushions laid upon them; the Kitchen was very hot, and all officers at work for provision; the table is spread with all dainties, and the cups fill'd with Wine; fat and cramb'd Capons, Pheasants, Partridge, Peacocks, Quails, Turtles, that feed on figs and grapes, and those birds that have two hearts to set them forth come flying to the table: Turbots, Gilt-heads, Sturgeons, are not worth speaking of. The shell-fish of *Campania* with purple juice, and Oysters from *Abydos*, and whatsoever the whole ocean can afford, are ready. The Wines, are white, black, red, purple, and whatsoeuer sharp, *Cecubum*, *Falerum*, *Cibum*, poured forth in full bowls. To say nothing of the second table brought from *Tarentum*, and the dainty carres, with Rose, Violet, and Iacinth coloured. Lastly, no delights, dainties, pleasures, or joyes are wanting, that the rich Gown, (for she is daughter to *Bacchus* and *Venus*) with her sisters, the hand and knee-gowns, may be entertained delicately. The Spider also as good hap was, light upon a poor Cottage instead of a rich palace, and there she teacheth man and wife what duties are useful for both, and sets her self with care, But perhaps some man will object that they can finde no good fortune in this, but only the Spider may be commended for changing her habitation and her host; but it is very fortunate for her: for she lives not only safer, and more at rest, but she doth not from the roof as from a watch-tower; behold many more adulterers, gluttons, riot, prodigality, lasciuiousness, plays, dancings, wantonness, dicings, cardings, and lastly those vanities, and beastliness, that never enter into poor mens cottages; whereof she knew her self to be guilty, whilst she lived in Courts and Palaces of great men, who so soon as they had driven forth the Spider, (the mistress of labour and frugality) were presently seized on by the Gown; and not only so, but all luxury, dissembling, lying, flattering, pride, entered into their palaces, or rather into their ears; eyes, and mindes, and polluted them with all wickedness and companions of all mischiefs: were it not better for Kings to allow this good, frugal, wise, harmless little creature a room in their large chambers, than to hearken to, and to reward to much such pick-thanks, and Court-flatterers, and voluptuous persons, who by their wicked counsel and example will quickly corrupt the best men? I know not whether I *Prayles of the Spider from the gifts of her minde* were best commend the Spider for the gifts of her minde, as wisdom, justice, valour, temperance, humanity, love of poverty, love of works, sufficiency, cunning, cleanliness, and her other vertues; or else her admirable art and skill in weaving her Webs. Her widow appears in that, that when the Rivers are like to rise higher, and drown her house; she removes to some safer place. In fair weather when the Flies fly about, they weave not, but wait on their prey: she runs away at the least touch of any thing that troubles her, and hides her head in her hole (as Vipers do) that she may feel the lesser pain, and that her body being hurt, (which is easily healed) yet she may preserve her head that governs the whole body. Who taught them to know this? Did any *Chaldean* teach them, by the situation and position of the Stars? No indeed, but the Spider hath a certain divine wisdom given her, as the Poet sang truly,

Her body moves by vertue of her minde,  
Diffused in every part——

[illegible]

with her hands, whereby she can go and come to her nets and retreat at pleasure, and also (if any prey be taken) she perceives it by the motion of her web. But to be more certain, before she comes down, she draws her third back sometimes, that she may know how it is by motion and weight. Then first she fasteneth to the centre; which the ensnared little creatures either feeling or conjecturing, do lie still, lest by motion they should discover themselves and be more entangled; yet they cannot deceive the Spiders who with feet and eyes perceive their prey, and run swiftly unto it suddenly. But good God, what and how great justice is seen amongst Spiders? None of them robs another of his wife, none of them enters upon another's house; each of them lives by his own labour and possessions, and they hold it unlawful to break the bands that belong to their neighbours:

*But men are not so just, oh pity 'tis to see  
How covetous they are, lust reigns in each degree:  
Adding house to house, both fear and lands;  
And more worlds they vain would have in their hands.*

Farther, they do not pitch their nets for such creatures as are good and useful, but to catch Hornets, Oxe-flies, Horse-flies, Wasps, Drones, Breezes, Gnats, Common Flies, which are to us like bawds, thieves, flatterers (as the Comedian speaks) that breed us many inconveniences, but are no way fit to do us any good. Moreover, she dares (as she is very valiant and magnanimous) hunt after the Lizards young ones, whom the presently involves in her net, as they make resistance, then laying hold of both their lips with a deadly biting, she holds them so fast, that she makes them dye under her. And lastly like another *Cæne* she draws them backward dead into her lurking place. And by chance in this great contest, she finds her nets broken or folded together, she presently repairs, unfolds, and spreads them anew with great dexterity. Farther yet, there is a fierce and everlasting feud between the Spider and the Serpent: for if at any time the Serpent seeking shady places, falls upon some places under a tree where many Spiders are, one or other of them will fall right upon the Serpents head with his net, and she will so beat upon his brain with her mouth, that he will make a noise and hiss, and be so venomous, that in this miserable condition, he can neither break her thread, nor escape from her. Nor is their end of this combat, till the Spider have destroyed him. Let the *Romans* be silent concerning their battails on the stage, and the cruel combats of Elephants; when a little Spider dares fight with a horrid and wan Black Serpent; and not only to fight with him, but to triumph over him, and carry away the rich spoils of her victory. Who would not admire to great force, so great weight, so sharp and hard bitings, and almost incredible strength, in so small a body, and of no consideration, having neither bones, nerves, flesh, and hardly any skin? this cannot proceed from its body, but its spirit; or rather from God himself: In the same fashion they enter the lists with land and water Toads, and kill them in single fight. For not only *Pliny* and *Albertus* the Philosopher mention this, but also *Erasmus* in his Dialogue of friendship relates, how a certain Monk, who slept with open mouth, and had a Toad hanging at his lip, escaped by assistance of the Spider. Oft-times also they enter the stage with the winged Hornet, that hath a strong sting, and fibres almost of horn, who straight by main force breaks through their webs, as great rich men do with the Laws, yet at last he is wrapt in a more tremendous glew, and pays for breaking open their houses, and conquer'd in single duel, he becomes subject to the Spider.

I must not pallie by their temperance that was once proper to Man, but now the Spiders have almost won it from them. Who is there now, (if age will let him) who will be content with the love of one? and doth not deliver up himself body and soul to wandering lust? But the Spider so soon as they grow up, choose their mates, and never part till death. Moreover as they are most impatient of convivals, so they set upon any Adulterers that dare venture upon their Cottages, and bite them, and drive them away, and oft-times justly destroy them. Nor doth any one of them attempt to offer violence to the female of another, or to assault her chastity. So great command have they of their affections, so faithful and entire are they in their conjugal love, like Turtles. If you respect their household government, what is there more fragrant, more laborious, or more cleanly to be seen in the whole world? For they will not suffer the least thread to be lost or placed in vain; and they ease themselves by interchangeable work; for when the female weaves, the male hunts; if either be sick, the other supplies both offices, that they may deserve alike. So sometimes the female hunts, and the male weaves, and this at any time when the one wants the others assistance; for we cannot think them so void of mutual love, that living so faithful in Matrimony, the one should not lend a helping hand to the others necessities, and so by mutual courtesy they continue their friendship amongst themselves. The female at home being now learned from her Parents to spin and weave (as she is wont to do with us) she begins her webs, and her belly contains all the matter of them, whether it be for that at a certain time her entrails are so corrupted (as *Democritus* said) or that there is a kind of woolly fruitfulness in her as there is in the Silk-worm. Yet *Aristotle* will have the matter to be within one, like a thin shell which is drawn in length, by spinning and weaving; or after the manner of those that shoot out their bristles, as the Porcupine. However it be, they lose not the

least end of a thread, but they undertake all by providence. Their love to their young ones no man can rightly describe, but he that loves his children himself. For by mutual incubation, they foster their Eggs, and raise up and increase the heat of them; and though oft-times they produce three hundred young ones, yet they bring them all up alike to labour, sparingness, discipline, and weaving, and love them all alike. I have oft wondered at their cleanliness, when I have seen those that were weak and sick to go down to the bottom of their Web, out of their dens, and exonerate their bellies, lest by the filth of their excrements their houses, or Web, or threads should be polluted. And these things shall suffice for their civil and oeconomicall virtues. Now let us proceed to their art of making Nets, which is so offensive to *Pallas*, for the Scholar exceeded her Mistris in the curiosity of her work. First therefore we shall consider the clammy stuffe that draws like Bird-line, which loatheth not its tenaciousness by driness, nor by moisture, we said from *Pliny*, that she draws this stuffe out of her belly. But seeing that the males weave also, I think on good grounds, with our friend *Bruerus*, that it is drawn out of the entrails behind. And since it cannot be exhausted, we may wonder at the infinite and endless power of God, and adore it, for it were next to madness to assign this to bodily or natural causes. Those Spiders are held to be the best Artificers that work in Autumn, and are called *Holci*; they draw a thread that is smaller than any linen or silk, and farre lighter, and so pure (saith *Aelianus*) that the whole Web wrapt together, will scarce make one thread as great as a linen thread though it be never so small. *Edwardus Monimus* described these, both Males and Females, very elegantly *Heptam*: l. 7. in these words:

*He hunts at home,  
But she doth weave within her tender loom,  
And jugler-like, she from her belly casts  
Great clewes of yarn and threads, which while is last;  
She works to make her Nets, and every part  
She frames exactly by Dedalian art;  
Her Web is fastened to the beam, the threads  
Are parted by six lines as severall heads,*

*She works from Centre to circumference,  
The Web is made on both sides for defence,  
Pervious left when the East-winde doth set  
Strong, it might break this tender work, and yet  
The strongest Flie may be held in this Net.  
No sooner can a Flie but shake her threads,  
The male runs to the Centre, and his head  
Peeps forth to catch what comes, so he be fed.*

The variety of their Nets is so great, that it is not called amiss, the Goddess of a thour sand figures; some of them are looser, some thicker, some triangular, others square, some Diamond figures, for the commodity of the swiftnesse of hawking: But that which is round is commonly wrought between two trees, or Reeds, and oft times in divers windowes, hanged fast with ropes, and sail-yards. Good God, what great reason, judgement, art, what admirable wisdom and beauty the shews! Truly we may not suppose amiss, to say that *Euclides* learned to make his figures from hence, and Fishermen their Nets; for from whence else could they fetch such an example of so curious and laborious a Mistris? so finely is her work beinformed, and made so round and exact, and so equally ballanced, and she doth to work her body in place of a weight and spindle, that she may well be compared with *Minerva*, but that the comparison makes me afraid. Also the work is so firm, though it appear so weak, that it will hold Homers, endure force of windes, and dust being fallen into it, it rather yields than breaks or is hurt. The manner of her Net-work is this: First she draws her semidimeters to the places circumambient, most fit for her work, then with no compasse, but by a naturall skill of her feet, she makes 44 circles with her thread from the center to the circumferences, by equal parts more distant one from the other. Moreover that is worth our knowing, as also it seemed most admirable to our most learned *Turnerus* and *Bruerus*, namely, that those Spiders when they are purposed to fasten a thread from a high beam, in a right line to the earth, they hold a little stone with their feet, and then by degrees they let themselves down by a three doubled thread, that the angle at the earth may answer the angle above by the beam exactly. But that above all the rest is worthy of admiration, how they fasten the first thread on the higher side of the River, and the second on the farther side, whereas Nature hath not taught them to fly, or to swim; I much doubt whether they leap over or not. The second praises in weaving they deserve, that build on the rafters of houses, and other Field-spiders, who upon the grass weave a Net, that is broad, thick, and plain, and it is a Net indeed, spread forth like a sayle, or sheet. In the work of these Spiders, if you consider, the wof, the skains of yarn, the trelle, the shuttle, the comb, the wof, the distaff, the web, either you will see nothing, or you must see God insensible, yet really performing all these things; and truly in spinning, they go far before the *Egyptians*, *Lydians*, *Penelope*, *Tanagris*, *Amazons*, *Romes*, *Claudianas*, *Sabinas*, *Julias*, and the Queens of *Macedonia*, that were wonderfully skilled in spinning, because (beyond all ordinary reason and art) no threads being drawn overthwart, they make a solid and tenacious Web, of a straight continued long thread. Their work being ended, they smear it over with a birdlime glistinous spirit, by the touch of which alone the prey is entangled, and pays for its blindness and want of foresight. The colour of her Web is areall and transparent, or rather no colour, which is the thing deceives the Flies that are not aware of it; and they that see best hardly escape it. For had it, but any perfect colour, they would think what need they had to avoid it, and fly farther from it. The most ignoble

Spiders, (namely, those that are sluggish, fat, and that ly in holes) make but a very coarse Web, and grosser thred by fame, which they hang only to holes in Walls. These have a more heavy body, shorter feet, and are more unfit to spin or card, they light upon their prey rather by chance than seek for it, because the hole is great without, and seems a fit place for Flies to hide themselves in; but at the very entrance they are ensnared by the Spider, and caught, and are carried into the Shambles for Flies to be slain. For they ly deep in Walls, that they may escape the Birds that ly in wait for them (as Sparrows, Red-breasts, Nightingales, Hedge-sparrows) and that they may the sooner ensnare the Flies that suspect no harm. And for Spiders that are harmlesse, and for their Webs, let this suffice: Now we shall add some thing concerning those kinds I have observed.

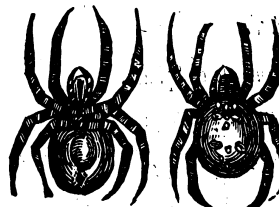
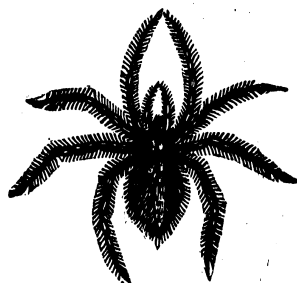
## CHAP. XIV.

## Of certain kinds of Spiders observed by Authors.

Y<sup>O</sup>u may remember that I so divided Spiders, that some were venomous, and called *Phalangia*, and others were harmlesse: Few of the *Phalangia* (and perhaps none) use to spin, but all the rest spend their time in making threds or Nets. Some of these Net-workers are House Spiders, others are field Spiders, to also are those that make threds distinguished.

Amongst the Net-workers I saw one the greatest of all, I have set down the picture of it here. In Autumn amongst small Rose-boughs it extendeth an artificial Net, and it catcheth either another Spider running over it, or Gnats or Flies that come to it; when she pulls her cord with wonderfull dexterity, and when she hath hanged them thus up, she leaves them till she grows hungry again. She hath a frothy body, Ovall figured almost, it hath a little head with pinners under the belly, and the back is adorned with white spots: This is one of the Autumnal *Holci*, and in a very short time it will grow from the bignesse of a Pease to be as big as you see her here described. Amongst the Web-makers, we have seen some spin a very fine Web, others spin one that was but moderately fine, some spin bafe stuffe, grosse, rude, and ill favoured: The most subtile work-masters are the House-bred Spiders, whereof we have here set down one of a brown colour, of the bignesse of the figure, and being placed between you and the Sun, it is of some transparency. This is it whose commendation was written by *Cassius Secundus Curius*, and the nature of it by *Pliny*, which taught *Helenus*, *Penelope*, the *Egyptians*, *Lydians*, *Macedonians*; and others that were given to spinning. This field Spider weaves a moderate and strong Web in hedges, stretch- ing forth his feet with a Coverlaid, and where he dwells he waits for his prey. His Web is thicker that it may not rain through, and better to endure the force of winds, she hath a brown body, but feet that are changeable colours, varied with black and white spots in order, she hath a forked mouth, fenced with claws, the two white spots that are seen above in the head I know not whether they serve for eyes; the whole body is gently hairy; she doth stretch out her Web wide and long; that she may catch much prey, to which she is very much addicted. This field Spider spins a bafe and un- polished thred, and gathers it as it were into a

bundle. *Pennius* first observed this kinde in *Colebecher* fields between wilde *Origanum* watch- ing for Flies, and he never saw it otherwise. It hath feet like to those described just before a round



round body like a Globe, the back is marked with white spots, also it hath a fundament four square, and black. Hitherto also we reserve three kinds of the Spiders called *Lupi*, who live in chinks of Walls, heaps of stones, and old rubbish: they weave a bafe and small Web in their holes, and in the day time they wander farther abroad in hopes of prey, which they set upon with great force, and draw into their dens. The greatest of them is of a brown colour, it hath a head almost of Ovall figure, the body as a Globe, both sides are adorned with two small and short white lines, about the middle of the back it is of a more whitish colour, it hath feet comely with divers black and brown spots: The middlemost is the least, and grey-coloured; the ridge of the back is set forth by three Pearles as it were, whereof that which is next to the neck is greater and longer. The third seems to be blacker, wearing a Crosse overthwart the back very white, and with right angles, and therefore some call it the holy Spider. I conjecture that these are of the Wolf kinde, because they run with a kinde of leaping, and discover a great ravening appetite, for they lay up nought for the morrow, but consume all their provision in one day. *Gesner* saw

one of this kinde that was Ash-coloured. There are also Spiders with long shanks, that make disorderly and most rude work. The field Spider with a body almost round and brown, that lives about grass and Sheep; the English call it *Shepherd*, either because it is pleased with the company of Sheep; or because Shepherds think those fields that are full of them to be good wholesome Sheep-pasture, and no venom to be it, (for this Shepherd taken inwardly, or outwardly applied, is a harmlesse Creature.) There are yet more kinds of Spiders; for there is a kinde of black Spider, with short feet, that hath a white Egge under the belly, white as snow, and running swiftly; when the Egge breaks, many young Spiders run forth, which go all with their Dam to feed, and at night they rest upon the Dams back. *Pennius* supposed that this was rough with warts, until he touched it with a straw, and saw the young Spiders to run down. Also in rotten hollow trees there are very black Spiders, with great bodies, very short feet, that dwell with Cheesflies, and Caterpillars called *Juli*. Also saith *Gesner*, we have seen them all white, with a compact and broad little body, upon the flower of Mountain Parsley, Roses, and grass, they have most long slender legs, the mouth is noted with a spot, and both sides with a red line; he thought it was venomous, because he saw a Munkey almost dead that had eaten one, and could hardly be recovered by powring Oyl down his throat.

We know also Spiders with a long body, and a sharp tail, they are red from black, as also green. Also there are red ones of two kinds, one great one that dwells only in the Caves of the earth, with a body Cinnabar colour, with feet yellow from red, the tail and belly tend toward yellow a little from brown. There is another sort very small, lesse then a Sheeps Tike, as red as Scarlet, it hath but six feet, being a monster amongst Spiders; it hath a head like as Spiders have, but it is very small: It lives in the earth, and weaves a very coarse Web, and not well wrought; sometimes she wandreth abroad, and shews great agility to catch her prey. We grant willingly that there are more kinds of Spiders, and of more colours; for our land brings not all things forth, nor yet did *Aristides*, though he was called *ambrosius*, see all things. It may be future times may delineate the rest better. In the mean time we have spoken of Spiders if not to delight, yet according as

we thought fit, and we would do no more, because in writing so much of them we have taken great pains: Yet this we shall observe, that all Net-workers, and Web-workers amongst Spiders, do grow to have greater skill by age, and that shut up in Wool, they increase the generation of Moths, and they yearly oft times cast off their old skin, and the greater and suttier they are, the more ingenious are they found to be in their gifts of life.





ceed from so healthful physick; also he asked confidently for the rest of his reward, and to be given him freely. Truly in this present corruption of manners and times, how highly is such a Mountebank esteemed, wherein chance is accounted for skill, and one accidental rash cure of a disease, with danger oft-times of the patients life, makes a Quack-salver a great Physician; and he is judged worthy of praise and honour? But a better revenging Judge will correct these things; we pass on to Pismires.

## CHAP. XVI.

*The commendation of Pismires; wherein we shall describe their Differences, Nature, Ingenuity and Use.*

TO begin with the commendations of the Pismires, I know not whether I shall first speak of their body or minde, since Ants for both are not only to be preferred before many Insects, but also before many Men; for they are not one ey'd, nor horrid skew-ey'd, nor do they walk with cramm'd guts, as *Ballo* doth in *Plautus*; nor yet are they mishapen; crook-leg'd any way, gorbellied, over close kneed; blub-cheek'd, great mouthed; lean chopt, rude foreheads; or barren, as many great Ladies, and noble Women are, who have lost the faculty of generation; but the beauty of their body follows the goodness of their minde, and nature hath given them for their degree and order, a constant and absolute perfection. *Cardan* was the first said they were blinde, because their body is small; not remembering that there are many Flies and Gnats that are far less than Ants, yet they have eyes and can see well. If they were blind, I see not what the light could profit them, and they would work as well in the night as in the day. I confess that their foreyards serve them for a staff to prove the way, not that they do not see what way they go, but because by those means they try the hardness and softness of things. They have a very little head, but round as the heavens are, wilde brain'd, set with eyes, a mouth with teeth, and a throat not without a tongue and a palate; they have a square breast with ribs to defend it; with lungs, or bellows that supply their room, that are so firm, and yet loose, that they never grow out of winde by labouring, but always draw their breath most freely. They have a stomach in their belly that is strong to digest venome, (for they feed often on Serpents and Toads) and they are very hot in the matrix, and very fruitful, for their commendation. What should I here mention their swift walking, and their equal motion when they go? for they not only out-go pack-horses for the proportion of their bodies, but out-run the swiftest Chariots. They vary in colour, according to the difference of their kinds and places. For there are red ones in *Mauritania*, and the Inhabitants of *Budemelum* have white ones. In *Europe* they are most an end black ones, yellow, and somewhat red from tawny. Here they seem very short, smaller, fine necked, slender, and weak bodied; yet these will carry a weight three as great and heavy as themselves; and those in *India* of a great bignesse, will carry great pieces of flesh with them, and devour it.

Their praise  
from their  
minde.

Their bodies you have seen now see their minde,  
It's a sparing and laborious kinde.

And holds and keeps whatever she can finde.

*Virg. 4. Eneid.*

Truly, as often as I remember the profuseness of *Caius Julius Caesar*, the luxury of *Caligula*, the prodigality of *Nero*, the excessive gluttony of *Apicius*, and the great waste of *Helio-gabalus*; so often do I exceedingly commend the wit and ingenuity of the Pismire, and prefer her prudence before that of Men. I know that they lived sweetly, and with far patrimonies from their fathers, they gained large inheritances; yet they found out new use of baths, dangerous kinds of meats, curiosity in banquets, ships made of cedars adorned with Jewels, the drinking of pearls, and they wasted as much in one year, as they could extort for tributes and customs, or by plunder both at home and abroad all their life time. *Licinius Crassus* had formerly much riches, who being brought to need, was laugh'd at by all that met him, and the people in a jeer, called him the rich *Crassus*. And (Oh God!) saith the Comedian, what a miserable thing it is for a man to have had a great estate formerly, and to have nothing now? how much better were it for us to imitate the Ant, who gathering corn in Autumn, doth not waste it prodigally in Winter rioting, but keeps it providently for future use, and daily store? Hence it is that she is never tormented with hard poverty, nor is she tossed on the billowes of crois fortune, nor is she endebr'd or in danger by borrowing from others; nor doth she seek from other creatures either work, or sustenance to maintain her, and keep her in health: and if frugality comes from fruits, as the Erymologist derives it, (for our Ancestors, the Masters of old sobriety, scarce knew any other diet) it is very credible that that virtue is passed from our first parents into the Pismires, who feed only on dry corn to maintain their lives, and avoid all superfluity of many dishes. Hence the Poet elegantly signified that the *Myrmidons*, the most excellent people of the Greek Nation (if you consider their temper-

temperance, their labour and their diligence) were descended of the Pismires. For whence could they have gotten so great abundance of riches and goods, unless by an *Emmet's* prudence they had preserved what they had gotten and laid up to prevent poverty? And as sparing in keeping, so diligence in getting, and wisdom and industry is found to be admirable in them. They take a very commendable way first to preserve their life, then for their posterity, and lastly to provide their victuals. First of all, they build themselves an house, as in the golden age, not covered with ryles for delights, but with green turfs, and not made of bricks, but fenced with mud-walls. Histories do mightily magnifie the Pyramids, and trenches of *Egypt*, and the Labyrinth of *Crete*. But no man can sufficiently set forth the excellent work of trenches that the Ants make, the figure, the magnificence, the turnings, windings, and revolutions thereof: for these by an unpeakeable prudence, beyond all mans art, make houses under ground with such strange turnings, that they open only the way that is unaccessible to others, and is not possible for that which would do them wrong to enter at. First they make the earth hollow with their tender nails in the place of spades; and to throw the earth forth, they use their hinder feet for shovels: hereby they cast up a mound, and fence it about as with wals or forts; then they cover their work with chaffe, straw, leaves, bowes, bark, and pieces of sticks, and laying on new matter, they raise a tower that may be seen afar off, (called an Ant-hill) which is far higher and more sloping than the foundation, partly that their houses may not fall by rain staying about them, and partly that they may live the more healthfully by reason of the air that penetrates and passeth through. This divine little creature fetcheth the fashion of its building from heaven, either because their multitudes required room, or their excellence required the best. The entrance is not right forth but turning with many labyrinths and mazes; they distinguish their chambers in this tower of theirs in a threefold order, yet it is so hard to come into them, that *Argus*, who was all eyes, may be often deceived in them. The first room is large enough, like the Presence-chamber, where they all meet, and converse, we call it the universal Congregation house of Ants: under this for the females, there is the feminine room arch'd by *Dadalan* Art, wherein the eggs are laid safe that they may produce their young ones, it is made lest they should be thought careles of posterity. The third chamber is most inward, and most safe from snows, and that is built for their store-house for their food, that as it were in a granary they may lay up their belly-timber, and may fence it well from the winter cold that searcheth into all things; the adjacent parts and outmost skirts of their castle they appoint for a place of burial, and there they bury their dead with honour and state. And this is the manner of their building, plain indeed, and within the ground, as were the houses of the wise men of elder times, before that pride, and the head-strong ambition of *Ninus* invented to build up towers to heaven. Since his death, shall I speak of Kings or Princes? Truly there are some Citizens of the lower bench, who with extraordinary charge do build up, not an Ant-hill, but *Mausoleum*, or a prison for their bodies, and adorn it with all the cost and art they can; worthy they are indeed to be devoured by Pismires whilst they live, that dying by the force of a wise Creature, they may suffer for their folly. Nor do Ants build houses that are places for idle people, or such as are mischievous to harbour themselves in, but every one, yet without any Commander, follows some honest labour, and for the good of their democratically state, each one mutually employs his pains by turn. For they all, like those that labour in the Mines, do stoutly exercise themselves in digging of trenches, some serve to repair their houses, to adorn them, and to keep them clean, others with great assemblies and funeral solemnities bury their dead, in the place of burial adjacent, others again visit the sick, and out of their Granary they fetch some Physicall grain, (for they have Corn and grain almost of all plants) and prepare that and carry it to them. They have Officers of all sorts, as Purveyours for Corn, Gleaners, Storeys, Yeomen of the Larder, Householders, Carpenters, Arch-workers, Pioneers, for such is the virtue and skill of every one, that each Ant knows what is needfull to be done, and willingly doth his best to help the Common-wealth. But in their ordinary work what labour and diligence do they use? If they be minded to build an Ant-hill presently, or else are forced on a sudden to raise a new house, the old one being undermin'd and decayed by the Moles digging under them, they go forth all in troops, and from the rubbish of their houses thrown down they build new ones hard by. First they gather together their scattered Egges, and Corn, and put each of them in their proper places, afterwards they repair their hill, and covering and thatching that well, they keep all safe and dry: when the Sun shines, when they go forth to fetch Corn, the greater and elder go before them as Captains, the rest follow after. They creeping up to the top of the stalk, bite off the ears of Corn, and the young ones stay and gather them up, and the Chaffe being fallen off, they pull the Corn out of the husks, and then they carry it home; and the end of it being eaten off, if there be necessity, they set it at their doors a sunning, and when it is ventilated they lay it up again. When gleanings is done, they frequent the threshing floors, and there not by stealth, but openly they take sustenance for their lives, and they enrich their treasury. Which labour of theirs *Virgil* wisely describes in these Verses.

*As when the Ants plunder a heap of Wheat,  
Minding cold Winter, store is up for meat.*

*Thir*

*Their black Regiments through narrow ways passe,  
And carry their prey over fields of grasses,  
Some bear the burden; some them forward drive,  
Chafing delays, who shall work, most they strive.*

Wherefore not unfeily did the Prince of morall wisdoms, send those sluggish and slothfull Monsters of Mankinde (who like Mice live alwayes on other mens labours, and goe from dore to dore like Vagabonds to beg a penny) to learn wisdoms of the Ant, that by the example of the Ant, they may use opportunity, and lay aside begging, esteeming labour much, which is the Merchant for all that is good. Hitherto belongs that of the *French Poet*.

*Poor Sluggard who dost live in penny and want,  
Behold the hosthold prudence and wisdome oth' Ant,  
Lest she should stand in need, which she doth greatly fear.  
She gathers in one month, to serve her a whole year.*

This is their diligence in gathering, their care in preserving, their prudence in storing, their economical skill in distributing what they have laid up. I shall shew you also their modesty on the way, which me thinks should not be over-passed. For though they go in a narrow way, yet are there no brawlings, contentions or strivings for it, nor yet any mumblings, or fightings, or slaughters amongst them for place, (as it is usuall amongst proud men.) But the younger gives place to the elder, and he that carries no burden, to him that is loaded, and each of them is ready modestly rather to passe by an injury, then Wasphishly to offer one. If any man compare their burdens with their bodies, he will confesse that no Creature hath more strength, considering their proportion. They carry their burdens in their mouths; the greater burdens they attempt to take up backwards with their hinder feet, and lay their shoulders to them with all their might. They have all a care and mindfulness and endeavour for the publick good. They store up the seed they first bite, lest they should grow again in the earth; when they are subject to grow mouldy, and are wet with rain, they bring them out and dry them in the Sun, wipe and torefie them, and then they lay them up in their Granaries again. The greater seeds they divide at the entring. They work also at the full Moon in the night, (as good Mowers are wont to do) and when the Moon is in conjunction and hid, then they forbeare labouring. But what pains do they take in labouring? How diligent are they? And because they work in divers places, to come home with it, the one not knowing what the other doth. Certain dayes (saith *Pliny*) are appointed for a generall survey, and meeting to enquire into the businesse, what running together of them is there then? how civill is their conversation? how complementally do they salute one the other? how diligently do they seem as it were to talk together, and to make enquiry? You shall see fee Flints worn in the path they goe, and a path made in Marble stones, that no man may doubt but that diligence will doe something in any matter; for they all goe almost in the same path. For if one carry a burthen too heavy for him, the rest in the way will come and help him, lending their legs and shoulders, if it be a light burthen the fewer come to assist, if a weighty, more come, and either draw back, or thrust forward, or if the burthen be too great, by biting it in sunder, and dividing it, they promote their businesse: And by this means they bring home a great heap of straw and flicks to their houses. Now if any will attempt to hinder the Ants in their labours, (as the Serpents and Toads often doe when they meet them,)

*—They fight and will not flie,  
And hold it noble in these wars to die.*

For then (making as it were an agreement) they conspire together, and with horrid and cruell bitings, they destroy the enemy. He that hath not fastened upon the common enemy, thinks he hath deserved little of the Common-wealth, and upon that score they fight. In the time of harvest, when such an accident falls out, they do not meddle with a dead body, but presently as the enemy is vanquished, they fall to their labour again, and they gather up again the Corn they laid aside before the battell, and lay them up; for they hold it no prudence to stay to plunder, when greater businesse doth require their industry, and they hold it ignoble to contest with those that are dead. They feed chiefly on grains of Wheat, Winter Corn, Barley, and hard meat which they delight in. They take great pleasure in Cyprus Nuts, and the tender flowers of herbs that are red. They eat Scorpions (called *Gerarres*) saith *Rhazes*, and they feed on the Carcases of Serpents and Frogs when they are hungry. Otherwise they abhorre to eat corrupt and venomous things; nor will they touch fruit polluted with Menstruall blood, nor taste of them. Have not men by reason of hunger been compelled to feed on Horses, Wolves, Serpents, grasse, and dead bodies in time of narrow sieges? That is sufficient to prove their cleanliness; that they carry out their dead in the husks or bladders of trees and Corn, as of old time the *Romans* buried their dead in pots, but they now carry them forth on Biers. They delight to live in clean houses, and for that purpose they do not lay their dung, (that is like

like to Urine) within doore; and when they travel through dirt, and are bedawbed, at the entrance of their houses, they rub themselves clean against some rough bark. They love and take such care for their young ones, that they alwayes carry their Eggs in their bosomes, so long as they are little, and not so overgrown that they hinder their labour; but then they lay them up in their deep hollow Cave, that they frustrate the birds that prey upon them, as the Wood-pecker; the Nightingale, and also the Bear. But so soon as the young Pismires come forth of the Eggs, they immediately shew them the way to labour and take pains, and if they refuse to work they will give them no meat. Hence you may observe that they set every one his task: The stronger With their mouths, feet, little noses, do cast up the earth, and when they have cast it forth, they make it up in heaps, when they heap it up, they mingle straw with it, that it may lie light, and lie hollow. The wiser sort of them do build, the lesser of them remain in their trenches, and work, the more expert make windings like Mxandres and Labyrinths, and frame vaulted Chambers. If they observe any to be idle, they not only drive them out, pinched with famine as a bafe breed, but they bring him before the door, and calling a Councell of them all, they put them to death, that their young ones may take example, that they may not hereafter addist their mindes to sloth and idleness. The dayes appointed for labour and gathering Corn, they set venerous action aside; and chiefly in Winter, (when there is neither sowing nor moving) they couple together: yet for modestly sake they use venerous actions within doore, as the Bees do, at this time they make much of their Females, and when they are great with Eggs they embrace and love them most. Above all they take care (O wonderful love to their young ones) that nothing may be wanting to their off-spring for food or instruction. He only can doubt of the valour of Pismires who never saw them fight, nor heard the report of their battells. For they are not only full of choler, (as the proverb is) but they have a purpose to fight, so that they either joyn battell with external enemies, or else hold civill warres amongst themselves, when they want food. For though Pismires never fight when their Granary is full, and their Democratically Government stands fast whilst they have plenty of food; yet (what we read to have hapned in the best ordered Momachies) in a dearth, or rather want of provision, they fight desperately for food, and for their lives, and the lesser of them will rebell against the greater, (as being the greater gulphs of the Common-wealth.) It is the nature of necessity to give and not to take Lawes, and then chiefly when the belly a troublesome Client, doth feed on it self, and the guts croke and are empty. There are few juster Kings then *Lysimachus* was said to be, nor were there better Subjects then the *Athenians*, yet both of them did many things disorderly in famin, and he gained thereby to be branded with the name of a pusillanimous, faint-hearted Prince, and they of rebellious Subjects. Therefore this warre of the Pismires is to be commended, that is not undertaken for a Crown of Ivy, Bayes, or of Gold, or of Grasse, (which was accounted the most ancient) but from intestine necessity, and nature leads them to it; for neither could *Solon* himself endure thirst, nor *Solomon* conquer hunger. For these will dig under all walls, will be held by no bands, and they only know neither Lawes nor bounds. *Aeneas Silvius* relates a strange history of this fight, *lib. de Europa*, c. 50. His words are these. In the County of *Bononia*, many little Pismires that were hungry, clambered up a dry Pear tree to seek for food, the greater Pismires came upon them in no small number, and these took the meat out of their mouths, and killed some of them, others they threw down, those that were cast down returned to their Ant hills, or forts, in the way they meet with others, and seemed to talk with them, and rip up the injury they had received, and they bring forth all the forces they had, and their companions out of their tents. About two hours almost afterwards, soces they had, and their companions out of their tents. About two hours almost afterwards, so many bands of the lesser Pismires, and such a mighty Army drew forth, that the whole field appeared black by these black souldiers; they came all well guarded, and compassing the flock of the tree round, they began to climbe up. The greater Pismires when they saw their enemies at hand, drew close into a body to receive the encounter aloft; so soon as the Armies met and fought, the great ones killed abundance of the lesser ones with fierce biting them, and they destroyed all those in a terrible skirmish that first ventred up, that at the root of the Pear-tree there lay a great heap of them slain. The rest of the little Pismires and the middle Army would not be daunted by this, or run away, but they recollect their forces, and attempt to be revenged, and following more stilly, and pressing one Army after another, they mounted up the tree in greater numbers than before, and they bite their enemies on the backs, on the sides and in the front, and they forced them to yeeld, and leave the tree. The greater Pismires were much too strong for them, but the numerous multitudes of the little ones prevailed against them, and twenty at least set upon one. This happened when *Eugenius* the fourth was Pope, *Nicolaus Bistoriensis* a most learned Lawyer standing to behold it, and he related the manner of the fight, sincerely and truly. *Olam Magnus* reports the like accident to have hapned at *Uppsäl* and *Holm*, before that barbarous and cruel Tyrant *Christianus* the second was driven forth by the Inhabitants of *Sweden*, from ruling over the *Goths* and *Swedes* in which battell that must not be forgotten, the lesser Pismires after they had won the field, interred the bodies of their fellows, leaving their enemies exposed to the Crows and Murders; also they made choice of a high Tower for the place of combat, as if they would with a clear voice call and draw unto them the prodigy of Tyrants and his followers, to see their

destiny revealed, and the punishment that hang over their heads. Also they hurt Elephants and Bears, but not unless they be first hurt by them. They afflict Serpents and Dragons and make them mad, but it is either because they hinder them in their labour and stop the way, or because they breathe their venomous breath into their caves and turrets. Grasshoppers and Dormice they hate exceedingly, those because they spend the Summer time in singing, these because they lose the Winter in sleeping, for a Common wealth well regulated doth punish idle persons as well as those that are wicked, and the *Spartans* were wont to cast forth those that would not labour. They live very long, and would hardly ever die, unless the Birds did catch them before their time, or the floods and waters drowned them. They are for the most part very healthful, because they observe those three rules of *Plato* very exactly, mirth in labour, temperance in diet, and sparing in venereous actions. For what creature labours more cheerfully, diets more moderately, or did nature ever produce that is more temperate in venery? Also there is in them many seeds of domestic discipline, justice, friendship and other virtues; and he does like, either by nature or by art in us, we would scorn to live basely on the labours of others, and we would refuse to be slaves to our bellies. Moreover they have some sense of future things; for before a famine they labour exceedingly, continuing their work night and day, and every where laying up a great store, as *Juvenal* hath it *Satyr* 6.

—Hunger and cold away drive,  
And from the Ant learn thou an art to thrive.

Since therefore (to wind up all in a few words) they are so exemplary for their great piety, prudence, justice, valour, temperance, modesty, charity, friendship, frugality, perseverance, industry, and art; it is no wonder that *Plato* in *Phædon*, hath determined, that they who without the help of Philosophy have lead a civil life by custom or from their own diligence, they had their souls from Ants, and when they die they are turned to Ants again. To this may be added, as I related before, the fable of the *Myrmidons*, who being a people of *Ægina*, applied themselves to diligent labour in tilling the ground, continual digging, hard toiling, and constant sparing joined with virtue, and they grew thereby so rich, that they passed the common condition and ingenuity of men, and *Theognis* knew not how to compare them better then to Pismires, that they were originally descended from them, or were transformed into them, and as *Strabo* reports they were therefore called *Myrmidons*. The *Greeks* relate the history otherwise then other men do; namely, that *Jupiter* was changed into a Pismire, and so deflowred *Eurymedusa* the mother of the *Graces*, as if he could no otherwise deceive the best woman, then in the shape of the best creature. Hence ever after he was called *Pismire Jupiter*; or, *Jupiter King of Pismires*. For the generation of Pismires are endowed with so much virtue and justice, that they need no King to govern them, for each of them can regulate his own passions; or if they have any King, it is the Supreme *Jupiter*, that governs all, who is deservedly thought to be the Fountain and Author of all virtue both in Men and Pismires, and all other creatures. For there is none amongst men that doth govern better then the Pismire; and we that should teach them (as saith *St. Hieronymus*) may learn of them divers things that are necessary for our souls and bodies. For when contrary to their nature and industry they hide themselves, we are certain that rain is not far off; and when we see them running here and there, and carrying their eggs before them, we are warned thereby of great winds and tempests. Also those that are well acquainted with Country learning, when they see the Pismires run here and there, extreme fast, twice as much almost as at other times, and take such huge pains in gathering and storing up Corn, they are warned of a famine at hand, and so buy up all the Corn they are able. For they more rightly and certainly by their natural magic foretew Tempests, then our Soothsaying Almanack-makers, that are derided and exploded for vain fellows by all godly and truly learned men. For let *Ennius* be heard;

They that are out shew other men the way,  
And promise riches who have none to pay.  
To whom they promised to them they pray.

Nor doth *Accius* lesse elegantly describe them, who was the chief in writing of Tragedies, in his *Atticus* we read thus;

I trust no Wisard, who have learn'd the skill,  
Will gold their houses; others ears to fill.

They do better in my opinion who observe the Pismire, and grow rich by following his manners in labor, industry, rest and study. We read of *Midas* that he was the richest King of all the West, and when he was a boy, the Pismires carryed grains of Wheat into his mouth whilst he slept, and so foresaw without doubt that he should be endowed with the Pismires prudence, and should by his labour and frugality gain so much riches, that he should be called the *Golden boy of fortune*, and the darling of prosperity. *Ælianus*. And when the Ants did devour and eat up the live Serpent of *Tiberius Caesar*, which he so dearly loved, did they not thereby give him sufficient warning that he

he should take heed to himself for fear of the multitude, by whom he was afterwards cruelly murdered? *Suetonius*. They do teach us by their example of labour and virtue, both because they do inculcate unto us parsimony and perseverance, and also because when they are grown rich they maintain perpetual and inviolable friendship. For though at such a time one man is a wolf to another, and the desire of having more increaseth with gain, (which the *Greeks* call *φιλονησία*, Covetousness) yet as the *Comedian* speaks;

In good or bad what ere it be,  
The Ant with Ant doth still agree.

And they never fight and jar but upon occasion of extreme famine. *Harace* chargeth them with Covetousness, because they alwayes heap up more; but since they do that for the common welfare, that reproach of his is not their fault. But they eat Serpents, and live sometimes on venomous things: I grant that, and may be they use it for their Theriac, and are not therefore Pismires to be commended? Yes as well as the Storks, they ought to be fed from the common Treasure, and I might say to be adored as well as the *Indian Rat Ischnumon*. In *Æthiopia* the Priests sacrificed Pismires to the Sun, either because they thought the Sun the most beautiful, and therefore they would offer unto him the most beautiful creature, or the most wise, as seeing all things, and therefore they offered unto him the wisest creature. But you will say, they are most hurtful creatures to Vines, to Dittany, to young shoots, and to many tender plants, and *Pliny* calls them the plague of trees. But *Gellius* calls them more properly the revengers and judges of idle people; for they by their labour call us out of our lurking holes, and drinking houses, to till our grounds, and take care of our Orchards more diligently, and to exercise our wits, and to be more industrious in our business, and to do what is just and equal. Go forth then idle companions, and pounce on a little hot water wherein lime hath been infused, and believe me not, but you shall drive all Pismires away, and shall infuse more life and spirit into all thy plants. Origanum, brimstone, Alfa, Nitre, Snails-shells, Lupines, Lazerwort, wilde Cucumbers, Buls-gall, boyl, and cast on, or but in fume or sprinkled: also many things there are ready to be had for one that is diligent and laborious, whereby you may quickly drive out this plague from your grounds, and you may expect a great retribution for your pains, abundance of fruit. Moreover all those things that drive away Wasps and Hornets, that we spake of before, will afford you a sufficient remedy, and will also kill all the Pismires. Yet in truth, thou sluggard, thou hast more need to nourish up this creature and set up for it a statue of gold. For so of old time they are said to have done, when they worshipped the Ant, in an hieroglyphick, holding three ears of corn in the mouth of it, as being an emblem of divine providence, and labour, and of household care. For they are, to use *Aristoteles* words, without any King, and under a popular government; yet every one of them is for himself a father of his Country, and they do to their power increase the common good as if it were for themselves in particular. But if you object, that the Pismires by biting cause redness, tumour, tickling, and then a grievous pain where they bite; I do not wonder at that; I rather wonder at this, how thou canst look upon them, and not blush extremely, for thou canst not chuse but blush to see such great industry in so small a creature, and to behold the watchfulness, labours, journeys, sweat, and toil that he is busied in. Yet they do not wound idle people so much (whom alone they are said to sting) but it will be cured with an Emplaster of *Verginaea*, made of Flies and Pismires mingled together; for as *Scorpions*, so are they the remedy for the wounds they make; and they bring their cure along with them when they bite. *Pliny*, *Codmella*, *Arnoldus*, *Ælianus*, *Albertus*, and *Vitalis*, will direct you in other helps, but you must not draw them out and apply them, without using the prudence of the Pismire. Will you give me leave to reckon up the infinite benefits you may receive from them, for this small detriment you accrue them for? Now listen what the Ancients write concerning the virtues of them, and judge uprightly concerning it. For they are not only meat for Serpents, Dragons, Beares, Locusts, Rats, Dormice, Chameleons, Lapwings, Woodpeckers, Larks, Nightingales, Pheasants, Wagtails, Hens, sometimes to satiate their hunger, sometimes as remedies to cure them of surfeits, as *Pliny*, *Solinus*, *Plutarch*, *Palladius*, *Ælianus*, *Belonius*, *Albertus*, and experience do witness: But also the Inhabitants of the Countrey of *Mongi*, do feed on red Pismires seasoned with Pepper, and they are their greatest dainties as *Nicolas Vernetus* doth testifie. Also they are good to catch Locusts, and to bait for many fishes, chiefly the Roach. As concerning Physick, there are but a few diseases that these creatures, as the hand of God, do not yield some help unto. Doth a Fever burn and scorch thee alive as it were in the Engine of *Perillus*? hearken and I shall tell thee of an admirable water to quench that fire, and most effectual against it, as *Gesner* received it from a friend: Take fountain water one pound, honey three spoonfulls, shake them in a can, and set them in an Emmets hill, so that Pismires may easily fall into it; when you find that so many are fallen in as will thicken the water, shake the Can, and as you use to do in making Rose-water, so distill them. The dose is half a spoonfull, or more as the Patient can endure it by reason of his force more or lesse, it will wonderfully provoke vomiting, and will also evacuate the matter of the disease by Urine. *Pliny* is the Author of the old fayer, that a *Quintidian*, *Tertian*, *Quartan*, and all intermitting Fevers will be cured, if the sick cause the parings of his nails to be cast before the entering of the Ant hill, and if he catch the first of them that layes hold of them, and bind him up and tie him about his neck. Art thou troubled with pains in thy ears? go to, fill a glasse with Emmets and Emmets eggs, and stop it well, and take it in an Oven with

Their Physick  
call use.

with the bread, till it be as hot as the bread that begins to heat; then shall you find a water that is very usefull to cure the pains in the ears if it be daily dropped in. *In there a cloud before the sight* I preffe out the juyce of the red Emmets, and drop it in, it doth corrode with some pain, and wholly extirpate it. *Eriom, Trotila, Thophrastus.* Emmets eggs beaten and put into the ears, remove all deafness quickly. *Marcellus.* Some bruise them and prels out the watry substance, and drop it in. Some insufe them in a glasse vessell in Oyl, and boyl that on the fire, and powre that into the ears.

If Urine be retained and cause the Dropsie, drink twenty Pismires, and so many eggs with them in white wine, and they shall help you. Also their eggs distilled do much when Urine is stopped. *Les, Faventinus.* A Maid that cares for her beauty, and would make the circles of her eye-lids black, Emmets eggs bruised with Flies will perform that, and give them their desire. Some again either through age or disease (to use the Poets phrase) are beaten in their property, and have lost their generative power, that they cannot do the office of a husband if they would. Some Authours commend to these oyl of Sesamum with Emmets eggs bruised and set in the sun, if the yard and testicles were anointed with it. To this oyl some add Euphorbium one scruple, Pepper, Rew feed, of each one dram, Mustard seed half a dram, and again they set it in the sun. *Rafis.* *Arnoldus* in this case commends black Ants macerated with oyl of Elder. *Nicolas* mingleth it with roots of Satyrium; and others do give the distilled water thereof to those that are fasting. *Gesner* in *Enonymm* describes a water conducting thereunto; Take faith he, a pot beemeered within side with honey, and half full of Ants, then add long Pepper, Nymegs, Cardamon, Pellitory of Spain, each one pugil, Butter what may suffice, and digest them fourteen dayes in horse dung, then distill them in a Bath, and give a little duly to be drank falling. Others, faith *Merula*, add Comfery to oyl of Pismires; others *Borax*, or root of Masterwort with Wine when the impotent man goes to bed, and thus they affirm that men may be cured of feebleness, and women of barrenness. But I wonder at the force of Pismires in this case, for *Bransfelsius* writes that but four Ants taken in drink will make a man unfit for venery, and abate all his courage thereunto: yet he will maintain that Emmets with common salt and eggs, and old hogs greale, wrapt in a cloth and laid on, will cure the pain of the Hip-gowt. *Marcellus* faith, that if they be applied with a little salt, they are a present remedy for a Tetter: Also as *Serenus* relates, they are good against scabs and itch from an inflammation of blood;

*The dust in Emmets hils doth deep ly,  
Being mingled with oyl, will help it by and by.*

Also *Arnoldus* reckons Emmets eggs amongst such things as take off hair; and commends water distilled from them against *Noli me tangere*, and all corroding Ulcers. *Alberus* thinks that drank with Wine, they do powerfully dissipate winde. Reckon how many Warts you have, and take lo many Ants, and bind them up in a thin cloth with a Snail, and bring all to ashes and mingle it with Vinegar. Take off the head of a small Ant, and bruise the body between your fingers, and anoint with it any impostumated tumour, and it will presently sink down. *Nouns.* Also God, that I may omit nothing, by the biting of Ants called *Solpuge* (it is a kind of venomous Ant) drove the *Cynamoli* (a slothful and idle people of *Aethiopia*) from their habitations, and destroyed them quite. *Pliny.* Some think they should be called *Solpuges*, but *Cicero* calls them *Solpugas*. I have a few things to speak from Authors, as from *Antibolusius*, *Aphobius*, *Natalis Comes* *μυρμηγκων*, and *Moichea* a witty Book of the same argument. And *Aratus*, *Herodotus*, *Strabo*, *Aristophanes*, *Rafis*, *Aggregator*, *Berolus*, *Ryffus*, *Zetzer*, *Arnobius*, have by the by run over the natures of them, and their pollice life. But because they add but little to what hath been said, I would no longer play the Pismire, lest seeming to be eloquent I might grow impertinent, and searching every creek too narrowly, I should make more gaps. God grant that we whom God hath commanded to learn of Ants, when we are idle and mind nothing but our bellies, may by his good guiding learn of them, and he instructing us, we may perform our duty. It is a small creature, and contemptible for its magnitude, yet we must know that goodness is not in greatness, but what is good is to be accounted great. I have said.

## CHAP. XVII.

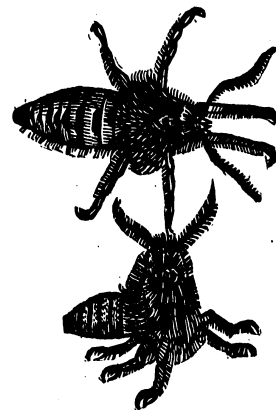
### Of the Glowworm, and the female Melo, and of Anthrenus and the field Chislep.

Oftentimes those that are of a great faction, and of noble descent, will scorn to marry with one of a common family. Yet the Poets write that *Jupiter* did not disdain to imbrace ordinary women; and the *Cicindela* or Glowworm, and the oyl Beetle or Melo, (though they are of the winged order) are not ashamed to couple with others that want wings. And for as much as these females are endowed with the same force and dignity by nature, which is seen in males, I know not why they should refuse or be weary of their chance, and of their females, when as (if their wings be taken off) they agree in the same endowments of their minds and bodies. We spake abundantly in the first Book, concerning their form, figure, manners, virtues,

virtues, use, when we speak of their males that have wings; and though this Treaty is allotted for Insects without wings, yet I would not artificially separate the females from their males, whereas naturall love hath from the beginning united them together.

I give you here the picture of *Anthrenus*, which the *Greeks* call *Anthrenus* without wings. Some conjecture that it is a creeping Hornet; others think it is a kind of the Spider *Phalangium*, which *Pliny* faith differs from a Hornet only in want of wings. It hath a crooked nose, and forked, and the face looks upward. It perfectly represents that horned Owl that we saw in the low Countries. It hath black eyes, a breast very hairy and yellow, the feet are yellow at first, then brown; the rest of the body hath 8 junctures that are yellow from red, which is much adorned by black spots on the back; from the top of the nose, sailyards or horns of a yellow colour grow forth; they are all hairy and flexible yet are they something hard in feeling. He bites so that it is hard to cure it, yet it seems not to be so deadly as the biting of the *Phalangium*, nor is it yet so gentle but that the venom of it exceeds the Hornets. I hereafter I can discover anything more concerning the nature of this little creature, the conditions and use of it, I shall willingly do it for the publick good; for far be it from me to conceal any thing that may make for the advancement of Learning.

From the similitude this Insect hath with a *Chislep*, we call it the field *Chislep*; for it is found in Corn fields; it differs from the rest only in the number of its feet, (for it hath but six feet that are very small and black) The neck of it is very short, the body something broad and compact, the tail somewhat painted. *Pennius* saw one in *July* about *Colechester*, or else he never saw it. What Physicall use it hath it is yet unknown to us.



## CHAP. XVIII.

### Of Mineral Worms with six feet.

IN *Pennius* his papers concerning the nature of Wormes, I did for a time wonder at his opinion, when he spake of Wormes in stones, and he averred that he saw little ones with six feet in old rotten stones. For I had received from all Philosphers, that all things that are very bitter, salt, fowre, sharp, oyle, hot, cold, solid, hard, though they may corrupt in time, yet they will breed no worms, and therefore *Theophrastus* calls them *εἶς*, not that they want life, but because they breed no living creatures. I began to weigh the matter narrowly; and to put into an equall balance, without fraud, all their opinions; at last I found that our Ancesters were here and there most foully deceived, and I ascribe more to mine and *Pennius* his eyes, then to all their words. Tell me in good earnest, is there any thing more bitter then Gall or Agarick, saltier then the Sea, more tart then Leaven, more fowre then Vinegar, more hot then fire, or more pure and cold then Snow congealed? yet certain it is, that Worms breed out of all these: and it shall appear sufficiently by the sequell of the story, that Worms are bred out of stones, neither drinell, nor solidity, nor coldness nor want of heat or moisture can hinder it: Nor will I allow of that, *That Nature produceth living creatures by a mixture of heat and moisture, and moisture is alwayes as the matter for heat to make a concoction of.* For not only where moisture affords matter, and heat doth manifestly concoct it, are living creatures bred; but there also, (that we may not seem to set bounds to the power of God) where we see with our eyes that there is neither of these, nay where we may conceive that they are both absent. The generation of the creature called *Pyrgonius* in the flames, of *Oripa* in the most frozen snow, will evidently prove this, and that was the cause that I sooner subscribed to the generation of Worms in stones. Moreover, they that with their graving tool, do make rough their Millstones that are grown over smooth by using, find Worms oftentimes bred in them, as the Brother of *Pennius* testified. *Felix Platerus*, the worthy President of the Physicians at *Basel* reported to me, that he found a great live Toad in the middle of a hard stone that was saw'd in sunder, that was bred there. And that excellent man *Zuingerus* relates the same thing of a Scorpion. And indeed these things had seemed to me incredible and monstrous, had I not known the same thing to have happened in a Quarry of *William Cave* a Noble man of *Leicester*. And neither Philophy nor reason is contrary to this opinion, since in the earth, the mother of all things, there is all kind of heat and moisture, and all kind of spirits; and (to use the words of a principall Physitian) all things seem almost to be

full of all things. Nor can I see the reason why Stones should rather be bred in living Creatures, then living Creatures in stones; and as I shall easily grant that there are Mineral vapours in us, so I shall not fear but may grant that there are animal spirits in them; and yet not wrong the truth, for they have inviolable and secret passages, nerves, veins, and turnings, whereby they either draw to them strange moisture, strange seeds and different vapours, or else receive them being brought thither. Some say, that the marrow of a mans back will produce a most venomous Serpent. *Cardanus* saith that Worms will breed of the ashes of Worms. Many Writers besides *Pliny* report that Scorpions will breed from *Basil* buried between Walls. All men do see that flies are bred in the air: And *Bonus Ferrarius* is not ashamed to say that it hath rained Calves, blood and stones, which things though they sound harsh, and not to be true, yet I dare not easily deny it, nor doth this at all impair the opinion we hold concerning Worms bred in stones. And if the reason of this seem to ly so deep, that it is too difficult for us to search out; you must think that truth lyeth so deep, and covered with so much darkness, that it could not be found out till of late years. And in the generations of these things, (which God only knows) truth will never shew it self but by conjectures, similitudes, collations, proportions, and observations. God doth here seem to scoffe and deride the arrogance of worthless men, that dare look asquint into the work-house of Gods Creation, and are not afraid to inquire into the reasons, and to search and trie, and to attempt to imitate the works of God. I wish we could be admonished either by the punishment of *Salmoneus*, or by the counsel of *Solomon*, to learn more modestly: For that is the only way I know to the true knowledge of things, and the safest for us to walk in.

## CHAP. XIX.

## Of Worms in Vegetables, that have six feet, and first of Worms in trees.

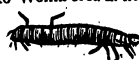
Worms in Vegetables are either Worms in trees, or in shrubs or Pulse, or Corn, or Herbs. The Tree-worms some of them feed on the wood, some on the bark, some on the leaves, some on the fruit, and of all these we shall speak in order. Those that corrupt or spoyle the wood are of divers sorts, for those that breed in green and growing wood are called *Junus*, those that breed in dry wood without sap, are called *Agria*, those that are bred in solid and dry wood are called *Thripes*, those that breed in hotter kinds of wood are called *Termites*, those that breed in saw-dust are called *Cossi*, those that breed in planks of Ships are properly called *Teredines*. Thus it may be took their name from *Sagru*, for they do bite and eat living trees, so that oft times about their roots a great deal of powder and dust may be seen, as it came by sawing. This Worm hath an ill-favoured head, of divers colours, covered with a covering, and he can put it forth and draw it in at pleasure. His feet are on the hinder part toward his tayl, as the *Cossi* have theirs on their breast, the rest of the body is covered with a sandy Coat, as it were their shell, and when they put that off they die, as Snails out of their shells.

In that time which Nature hath appointed they grow into a sheath like to an *Aurelia*, but what winged Creature cometh from that afterwards I could never yet observe. This is far greater than *Cossi*, by reason of its unsatiable eating, and is not so dainty. The Wood-peckers and other Birds that spoyle the trees do make holes in the green trees, and by the found finding out the hollow places, they dig and pierce in there, till they come to those devouring Worms, and they devour them. For they exceedingly delight in this kind of meat, and for love of it they will sometimes spend whole dayes in digging of a tree. *Erucius* is found in rotten and hollow wood, which will make no noise though you strike it with a staffe, it is very like to the *Cerastes* in *Theophrastus*, and the *Pittocampa* of the Physicians, but that it hath only three feet on both sides. *Gesner* attributes to it a venomous and constant evil smell, and a very corroding faculty. *Thripes* are thought to be named from *terendo* wearing; they are little Worms very frequent and common, their bodies are white, their heads black, or brown from red, with six very slender feet near their neck, and blackish with a little red, like to the Worm in a Hazel-nut for the fashion of their bodies; but they are shorter and smaller in the middle; they love no black wood, but are bred only in wood that is whitish, (as is the white sap of Timber, Hazel-nut trees, Birch, Cinamon, the Plain-tree) and they penetrate into these when they are partly dry and solid, and drinking up the moisture they have, they make them rotten. I passe over the contentts between *Pliny*, *Hesichius*, *Theophrastus*, *Plutarch*, concerning the signification of *Thripes*, whereof some are so negligent, some so curious in observing the properties of words, that in describing them they are very obscure, and as good as nothing. The Ancients used for Seals, the wood the *Thripes* had eaten, and chiefly the *Lacmians*, as *Hesichius* testifieth. Whence *Lucian* in *Lexiphi*. I keep them under seals eaten by *Thripes*. For these Worms as they eat forward, do engrave divers characters of herbs, and forms of living Creatures, and to exceed the Divine sculpture of *Phidias*, *Praxiteles*, *Myrmecides*, *Bupalus*, *Sophoniscus*, *Anthermus*. *Galen* speaks of a man that made Rings, l. 17. de usu part. who

who on the broad part of a Ring engraved exactly, to a wonderfull demonstration of his art, *Phaeton* with his Chariot and Horses, cut down headlong. But the Worm *Thripes* hath neither graving tool nor Iron instrument, but with his soft tooth engraves most solid Signets, and stampes wonderful pictures of all things sometimes, only by the conduct of Nature. When woods are dried by overmuch heat of the Sun, they produce and feed a Worm called *Termes*, which as *Servius* saith, being bred out of the very pith, at last consumes its mothe, and will not touch the hard baky substance. A very ungratefull little Creature, and so much worse then other Worms, the more it is hurtfull to the heart and vital fountain of trees: For they live sometimes when their bark and hard wood is devoured, but when the pith is wasted they die presently, and Nature can never cure this wound. They are like the *Cossi* in shape of body, but they are farre lesse, and much softer.



The name perchance comes from *Ku* a Greek word, as if you should call it a Wood-weevil. For the Philosopher saith that *Ku* is a little Creature bred in wood, like Worms bred in Corn; the *English* call them *Timber-worms*, because they are seldome in any wood but that which is cur, and prepared for building. Their bodies are full of wrinkles, and hence some *Roman* Consuls are called *Cossi*. The greater *Cossi* are almost as thick as the little finger, and as long as three fingers broad, of a whitish colour, almost like to the greater kinde of Caterpillars; wherefore the great ones are called by *Pliny* *Cossi*. They have three feet, on each side that are pendulous, not farre from their heads, short, slender, and black. The body of them hath twelve rings, those toward their tails are always smaller and shining; their heads are somewhat thick, of a dark colour, and the nose is small, forked, sharp as a Spear, black, with two plates in the forehead, near the mouth there are small hairs that are pointed, all the rings in the sides are severally marked with red points, a little hollow. It is a Creature that creeps very slowly, and the motion can hardly be perceived; wherefore *Festus* calls them *Cossi*, great bellies, and sluggish Creatures. He hath very little eyes, a round back, a belly something hollow, of a waterish whitish colour; they seem to be fat, and very soft; they breed in wood newly cut, but before it ought to be. But if they have been long cut, and have lost much of their moisture, the small *Cossi* only breed in them, that differ from the great ones only in bignesse. The Ancients in *Pontus* and *Phrygia* (as *Pliny* and *Hieronymus* note) fed on these as the most dainty meat; and for that use they fitted them with Meats, that they might be fed Worms. *Pliny* saith they serve also in physick; for they heal Ulcers, increase milk, and in Oynments they cure creeping sores, which *Alberius* also confirms. The *Teredines* have a very great head, considering their bodies, they gnaw with their teeth, and pierce into Oakes, as you may know by the noyse: But *Theophrastus* thinks that these are only found in the sea, and men think there is no other Worm can properly be called *Teredo*. We remember, that in the Ships of the *Venetians*, that had long stood in the Havens of *Alexandria*, that little ones were found, that were a cubit long, and as thick as a mans thumb, such as that famous Sir *Francis Drake* another Sea *Nephrus* brought home with him, in his Ship that had gone over the world, and was grown rotten and spongy. We saw other *Teredines* an inch long like to Worms bred in flower; they have a red body, a yellow shining head, a little red, a forked mouth, from the lips whereof little thorny hairs come forth; they have three feet on each side, the incisions of their backs are eleven, something red: The rest of the body is of a watry yellow, and shines; These three the greater they are the more darkly they shine, of a Crimson colour, were found in rotten logs.



the greater they are the more darkly they shine, of a Crimson colour, were found in rotten logs. The lesser they are, the whiter they are. The *Italians* call them *Byssam*, the Spaniards *Bromam*, from the eating of them, for they eat Ships, and penetrate them; whence *Aristophanes* in *Equitibus*, brings in a rotten Galley, speaking thus, *Being eaten by the Teredines am accused for it*. And *Ovid* saith thus, 1. de *Ponto*. It is eaten as a rotten Ship with Worms. By *Pennius* his leave, the *Teredines* eat not only Ships, but the beams of houses, so the Scholiast upon *Homer* saith, (*Odys. 19*) The words are these. *Mylampus* whose ears *Draco* had picked, that he might understand the voices of wyld beasts, was cast into prison for the Oven of *Iphigenia* he had driven away, where when he understood by the speech of the *Teredines*, that there was but little of a main beam left, he caused him self to be brought forth, lest it should fall and kill him; and whilst he was lifted up by a man and a woman, and got forth, the house fell, and both of them were slain. That is also apparent out of the chief of the *Latine* Comedians, when he brings in *Philolaches* a young man, he dy, speaking to them in these words;

If tempest comes, *Teredo* enters,  
And the rain at all adventures,  
Gets in, and rots the walls and wood,  
Make work for Carpenters; that's good, &c.

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strike the outsides of the linnen cloth, that they may drive back into the middle of the cloth these little Worms that haiken to come forth. But *Petrus Bellonius* l. 1. observ. c. 17. tells us of another manner of preparing Cochineal.

There is (saith he) in *Creta* a great increase of Cochineal: shepherds and boyes do gather it. They finde it in *June* upon a small shrub, of a kinde of holm that bears Acorns sticking to the stock of that shrub, without any stalk, and the colour is ash-colour with white; but because the leaves of that shrub are full of prickles like to Holly, the Shepherds have a staffe in their left hands to press down the boughs, and hold them so; and in their right hands they have a pruning knife, wherewith the cut off the smal boughs, from which they pull off little round bladders as great as smal pease, on that side they grew to the wood they are chapt and openfull of little red creatures smaller than nits, that fly forth at that clef, and leave the bladder empty. The boyes when they have gathered their Cochineal, bring it to the Treasurer, and he gives them victuals for it. He parts these little creatures from the bladders with a sieve, and then he takes them gently with the tops of his fingers, and makes bals of them as great as Hens eggs: for should he press them too hard, they would turn to juice, and the colour be lost: wherefore there are two kinds of dying stuffe, one of the pulp, another of the bladders, and because the pulp is more usefull for dying, the price of that is four times beyond the price of the bladders. *Gesner* also saw small Worms of a yellow and red, upon the uppermost boughs of the Juniper-tree; in the sponge of the Eglantine or wilde Rose, white worms breed, from which *Aristotle* saith that Cantharides do come. *Gesner* saith, that after two moneths the sponge being kept in a stove will send forth a great number of little live Worms. Also the Thorn and the Bramble, the Rose, Heath, Broom, tree Trifoly, Raspis, the Myrtle-tree, Capers, Bush, the Goosberry-bush, the Palm-tree, the white Thorn, the Privet, Park-leaves, Licorice, and indeed every shrub, and under-shrub is eaten by Worms: nor could *Palma Christi* (which afforded show to *Jonas*, that divine Prophet, when he was very hot) escape this plague, as we finde it written. Also Pulle, the guts of *Ceres*, are (to use the Philosophers word) most Worm-eaten; but how that comes to pass is most uncertain: whether it is as *Theophrastus* seems to say, when the juice cannot be distilled, by reason of the great heat, and the foulness of them? or should we rather say, that the dry part desires the humour, but the humour flies from it as its contrary? So we see drops hanging on a dry wall: or whether the over great heat corrupts both the natural heat and moisture contained within? That corruption comes that way, most sickly *Æthiopia* can testify. A little worm eats Beans, *Theophrastus* calls it *Midus*, and *Hesychius* τριῶν, τριῶν, is a worm breeding in Pulse, but chiefly in Pease, and hath its name from eating: and such a one breeds in chich Peason, after that the fatness of it is washed away with flowers, as besides the Scholiast upon *Hesiod*, *Phavorinus*, and *Theophrastus* determine. They often breed in the sweeter Pulse, both by reason of the fitness of the nourishment, and the nature of the air fit to breed worms; and when they are bred they nourish them, and shew them forth. Worms bred in corn are generally called *Nummi*, which feed on the roots, stalks, reeds, and prickles of winter Wheat, Panick, Oats, Rice, Miller, Rie; others there are that feed upon Wheat-flour, as those that are called *Farinarii*; others of that which is whole Wheat, not yet ground in a mill, as Weevils. The English call the *Farinarii* Meal-worms; they are like to flups worms, they have six feet, with a little shining red head, a round body, and divers coloured as the meal is: for the best and whitest meal breeds them white, the elder meal breeds them yellow, the lean meal full of bran hath dark colour'd. *Cardus* calls them Meal-moths, (but as it falls out frequently) not well considering of it. Those that are fed with bran, it is wonderful how great they will grow, and from ten in a short time you shall finde three hundred. They are found amongst woollen weavers at all times almost; for they make a mixture of Bran, Vinegar, and Hogs greafe, from whence they breed abundantly. The Weevil is the bane of whole Wheat, be it raw or torrefied (as



in form of *Actium* (which the English call *Manth*, the mother of Ale.) For so my Comedian hath it, though *Virgil* and *Varro* call it *Gurgulio* or *Curgulio*. The English call the Wheat-worm *Kier*, *Pope*, *Bowder*, *Weevil*, and *Whil*, as if you should say double Bill, yet it is indeed a living creature with three beaks. It destroys wheat chiefly, yet it will destroy any other grain, leaving nothing but the hull, and the thin skin. For as *Virgil* hath it in his *Georgicks*:

*The Weevil spoils a mighty heap of corn.*

It is formed like a small Beetle, it hath a beck proper to it self, and with three forks. Some of them are with black bodies, others with brown, but others that are the greater are greenish, and the middle of their body very small. This creature is so dry, that with the least touch it will turn to dust. It is bred chiefly in the Spring, some few daies before that Bees swarm. *Theophrastus* saith they breed of one part of the grain, and the other part they feed on. Our Countrey-men finde by experience that this wheat-worm will lay eggs in chinks of wals, and under the cyles; and from thence by procreation comes a new off-spring. They speak of three wonders concerning these little creatures. First, that though they be but few at first, yet in a short time they will increase infinitely. Secondly, that they will lie between the ryles and in chinks of wals without any meat at least three years. Thirdly, that if they be put into water three daies with

with Wheat or Barly, when they are taken forth they will live again. Our Countreyman *Siliardus* (a diligent observer of Nature) describes the propagation of Weevils thus: when Ants have casten off the top of the ear of wheat, the Weevil goes up, and in that little hole he laies one or two eggs (but seldom three) so great as a grain of Millet, long and yellow, full of liquid yellow matter; from this afterwards proceedeth another Weevil. This little Insect hath both sexes, for they copulate before they do this mischief. *Petrus Comestor* affirms that they proceed from Beans corrupted, to whom no man but *Gulielmus de Conchis* affents; lest they should fallily confound a Weevil with *Midus*, or Bean-worm. Beside this Weevil commonly known, *Joach. Camerarius* sent two others to *Penninus* out of the barns of *Germany*, with a far greater belly; one of them was a kinde of ash-colour, and the other green. Also *Scaliger* saith there is in wheat a worm without a beck, which perhaps *Pliny* meant by his corn-beetle. To this I will refer a certain little creature that is frequent in barns, that creeps with six feet, and with two short fail-tails it tries its way, it is spotted on the middle of its back and sides, and the rest of the body is black, which I therefore call the spotted Weevil. This creature doth no great harm to corn, because it is still alone, and seldom two of them are found in one barn. About *Leutzbourg*, a Town of *Germany*, a certain insect is found in the fields, which some call *Ulpus*, some *Korn-worm*, others *Kornveule*. It is said to be so venomous and hurtful, that the Husbandmen will leave their plough when they meet it, and run after it to kill it. It is black from a little red, dwelling amongst wheat and eating up the corn: worms bred in Vines, the scarlet Oak worms are like them, such as *Brassaulus* doth strongly maintain and think that they are bred on the roots of Pimpernel. Amongst herbs, both for physick, and for meat, the Violet, Radish, Rue, Basil, and many more are molested with worms. The worms in Violets are very small and black and run very fast, as *Jacobus Garcius* a most diligent Apothecary, and very famous in the knowledge of simples as there are not many, affirms, out of the root of the Hartichok a worm comes, that hath six feet, like to a Caterpillar, and whirith with a reddish black head; where it bites the roots of Hartichoks it makes them black, and at last kills them. The Radish produceth the like. *Cardan* saith, men report that there is a worm found in the leaves of Rue, and it will grow wonderful great, as the Hazel-nut worm will do if it be fed with sheeps milk. A little worm that is the childe of the dew, and a guest in basil with a body almost upright, he sticks fast by his hinder feet, whilst he takes hold with his forefeet. Sugar is made of the Sugar cane, the sweetest of all Sals, and as the common sort of Physicians suppose, it is altogether free from corruption. Yet under the authority of *Scaliger*, I assert that a little worm is bred in Sugar, long, black as a flea, and (if you take away his beck) like to a Weevil; and therefore we may justly call it a Sugar-worm. *Bellonius* also makes mention of this. But that Insect which the Germans call *Mayen Wormen*, seems to breed very seldom, saith *Camerarius*. For in the moneth of *May* dewes often fall that are very unhealthful, and if they fall upon the leaves of Hops, they turn to little living creatures called *Hoppen*. Amongst thousands of these you shall sometimes see one far greater than the rest (though it is scarce greater than a fat louse) it hath yellow circles about the belly, the back is chamber'd, the tail is somewhat long, the colour of the body for the greatest part is blackish. This when it wants alimant from dew, devours one by one all of his own kinde, ever beginning with that is next to him: he changeth his skin like to Silk-worms: lastly, when he is almost transparent, he putting off his last skin, he hangs by his head and feet by a kinde of thin bird-lime, by some leaf, and so he dies: why may we not call this worm the Hop-worm? In the stalk of the Asphodill, and so he dies: why may we not call this worm the Hop-worm? In the stalk of the Asphodill, a worm is bred of a clear colour when the herb begins to flower, out of his shoulders wings grow by degrees, and then when he can fly, he forsakes his habitation. In the twain joynts of the codded Armar, and the wilde Thistle, little white worms breed, as yellow ones do in the purple flowers of the battard wilde Chervil, and red ones in the root of Pimpernel. I often have seen in the female Smilage downy worms; in Musthroms and Coleworts, small black worms; in the root of Acorus, white ones: in the root of Elecampene whilst it is green and growing, white worms breed in ten or eleven joynts that are visible, that are as thick as a Gooftail, with a little black head, and six short feet, and the body all black. The Kings of the *Indians*, as *Ælian* testifieth, use to eat for their second course, a worm found in a certain plant, when it is rotted at the fire, and they commend it for the daintiest and sweetest meat. In the head or stalk of the Fullers Teash, we have seen a worm very small, with a little head, and six black feet, with ten or eleven incisions. First it eats up the spongy pith of the stalk, and when that fails it dies for want of food. It is easily found at the beginning of *October*, though *Marcellus* upon *Discordides*, doth most shamefully deny it. If I am not deceived, this is that worm the Ancients call *Tatinum*. *Xenocrates* calls a plant like to double Camomel *Galedragon*, (saith *Pliny*) it hath a stalk like Femel, Gigmet, with a tall and prickly head, and like to an egg in form: in this with age they say little worms breed, that are good against the tooth-ach.

In the roots of white Thistle (which plant is luxuriant in the high mountains of *Savoy*) there is a little worm found, breeding in some, in others it grows great, and in most of them it grows to have wings and ready to fly; it is white, and hath some joynts that it is divided by, and very black shining eyes. It may be there is great use in physick of a little worm bred in wilde Tansey: but I leave the enquiry of that to those that are curious in the secrets of Nature.

## CHAP. XXI.

Concerning the use of Worms that breed in Minerals and Vegetables,  
and the way to destroy them.

Some think that worms that are bred in stones, (whereof we speak) those I mean that are as great as Hand-worms, beaten into powder with the stone, are good to cure Ulcers. Also Marcellus witnesseth that these bruised and given with three Cyathi of water, will break and drive forth the Stone by urine. The Ancients used the more solid wood that the Thripes had carved with their teeth for Seals, and Antiquity ascribeth the invention of that to Heracles. In old trees red worms breed, whereof Serenus writes thus.

*From an old tree do but red worms procure,  
Bruise them with Oyl, and drop in warm, be sure  
For pains all ears this is the safest cure.*

Galen out of Apollonius subscribes this remedy. Worms that breed in hollow and rotten trees heal secret Ulcers and all symptoms of Ulcers, and diseases of the head; also being burnt and powdered with their weight of dry Dill, they cure Cankers. Marcellus, But Actius adds three Worms bred of wood to an Ointment against the Elephantiasis, which he learned of a certain Physician that took his oath of secrecy. The rottennelle that is made by their biting dries without pain, and is profitable for many things. Galen Enop. 3 c. 7. commendeth this kinde of powder, against knobs, clifts, and sores of the Fundament. Take Orpiment in pieces three ounces, rotten wood of an Oke four ounces, make a fine powder, then foment the place affected, first with the warm urine of a young boy, and afterwards strewe on this powder. But the Cuff is not only food for the Inhabitants of Pontus and Phrygia, and they delight much in them (as Worms in Cheese are to the Germans) but they also cure Ulcers, increate milk, and as Pliny saith, when they are burnt to ashes they cure creeping sores. The Worm in Fullers Teazil put into a hollow tooth, will give wonderful ease. Pliny. And if it be hanged in a bladder about the neck and arms, it will cure Quartane Agues. Dioscorides. One Samuel Quicquelbergius a learned young man, in an Epistle he writ to D. Gesner, hath these words, Saith he, as I was gathering of Simples, a certain old man came unto me whilst I sought for a little Worm in the head of the Fuller's Teazill, and he said unto me, O thou happy young man, if thou didst but certainly know the secret virtues of that little Worm, which are many and great. And when I intreated him, that he would acquaint me with them, he held his peace, and by no intreaty could I obtain it of him. Pliny asserts that the Colewort Caterpillars being but touched with it will fall and die. The Worms of Galedracon (which plant some men confound with Fullers Teazil) being put into a box, and bound with bread to the arm on that side the tooth akes, will wonderfully remove the pain, saith Xenocrates. The Worms of the Eglantine will cause sleep, and therefore some Germans call them Schlafwürm: They are applied alive to a Felon (but always their number must be odde) and they do certainly cure it saith Quicquelbergius. A little Worm found in the herb Carduus, bound up in a piece of Skarlet and hang'd about the neck, will cure the tooth-ache. Marcellus. The Worms that are found in the root of Pimpernel, make a most incomparable purple colour, (Gesner) that I wonder the Ancients said nothing of them. All little Worms found in prickly herbs, if any meat stick in the narrow passage of the throat of children, will presently help them. Pliny. Rub a faulty tooth with the Worms in Coleworts, and it will in a few dayes fall forth it self. Meal-worms are good and seem to be bred to catch black-heads, and Nightingales, and to feed them; nor is there in winter wholefomer meat for them: for they purge, heat, and nourish also, those Birds that have but a thin nutriment to preserve them. I spake before of the profitable benefit of the Cochineel Worms. Brassavolus affirms the same of Vine-worms, but how rightly let others judge; but they are not only good for dying, but necessary in Physick, for they both binde and cry, and scower without biting, and incarnate also, they cure rheumack eyes, mingled with Pigeons blood, they help suffusions of the eyes, they cure Dysenteries, they help hard labour in Child-birth, and debility, they cure Melancholy, fear, Epilepsies, they provoke urine and the terms, they heat the Matrix, they dissolve water and choler, they abate the panting of the heart, and upon that score they are put into Confection of Alkermes, and are the Basis thereof. Dioscor. Avicenna, Kiranides. I say nothing, how greedily Sparrows, Wood-peckers, Hens, Wood-cocks, Snipes, the Pardus, a Black-bird, Larks, Quar-snappers, Reed-biparrows, and many other birds, that are good physick, or else meat for us, do feed on the Worms of trees and herbs. Now since God hath mingled conveniences and inconveniences together, both to rouse up our providentiall pudence, and to punish us with punishments due to our sins, how both of these may be prevented I shall shew briefly. Jona being cherished under the shadow of the Gourd, he thought it safe and happy to be so, when the heat was so vehement. But God sent

a worm and took that from him, both to try his patience, and demonstrate his frailty. There was an Arch-bishop of Turkey, whose surname was Grey, as our Histories relate, when he had abundance of all Corn in the time of great scarcity, yet he refused to let the poor have victuals either for money or intreaty. A little after this his barns that were full of Corn, were so exhauited with Weevils, that they left not one whole grain of Wheat or Barley: Even as Solomon said, He that hoards up his Corn the people shall curse him, but blessing shall be on the head of him that selleth it. So God, that he may call forth a sluggish father or a family, sends the Moths and Worms into his Orchards and fields, both to make him laborious by this means, and also to teach him to make use of such helps and means that God offers to him. Our Antecessors have delivered by tradition many of these: But because Cato, Virginius, Pliny, Palladius, Theophrastus, Columella, Varro, Virgil, and many of those that were Princes in husbandry, have abundantly set down these things, we shall only give you a smack of them here, because others have given a full draught. That trees may not be eaten with worms, plant them in the new of the Moon, and cut them down between the new and old Moon in the conjunction. Also annoynt them with Tarre, and often wet them with the lees of Oyl. Also keep them under Covert, every where, that they may not stand exposed either to great heat of the sun or tempests of weather. Also that trees may not grow worm-eaten, annoynt their roots before the first planting of them, and then afterwards moisten their roots with mans urine and a third part of the strongest vinegar. Some steep a long while Squills with Lupins, and they sprinkle the places that are worm-eaten or press out their liquor with a Sponge, or they smear the flock of the tree till it be very wet, and they powr into the holes Bitumen mingled with Oyl. Others sprinkle on quick-lime, others Oyl-lees and old piss, others Hogg or Dogs dung steeped in Asles piss, the roots being first uncovered. Democritus taught men to bruise Terra Lemnia with water, (it may be he meant Carpenters red) and to smear them with that: Some pick out the Worm with a brasse pin and put Cow-dung over the hole. Red hairy Worms search to the inward pith, if you can draw these forth and not break them, and burn them hard by, it is reported that all the rest will dy with it. It is good also to powr often upon the roots, Bulls gall, and lees of Oyl: To plant Squills, Rue, Worm-wood hard by, to make a menstruous woman passe over the place often, to smear the pruning knives with Oyl of Cantharides, and to avoid lean and dry ground. By these remedies Oranges, Peaches, Pomegranates, Quinces, Pears, Apples, Olives, and Oakes, and other trees are kept sound a long time, and almost free from Worms. Ashes laid to fig-trees, drive away Worms, for it hath the force of salt, though not so strong. The seeds of Fig-trees or kernels will not be eaten by Worms, if a slip of the Mastic tree or Turpentine tree be set by them. As for Vines, Actius bids us to sprinkle Sea-cole with water, and cast upon the place in the Spring-time, and then to smear the roots of the Vines that begin to bud. For if you smear the pruning knife with Goats suet or Frogs bloud, or do but annoynt the Where-stone with it, worms will not breed there. Africanus saith that the tears of the Vine mingled with the ashes of the Vine-stalks, and put on the root with Wine, it will do as much. Lastly they are killed with a fume of Oxe-dung, Harts-horn, Goats-clawes, Lilly-roots, shavings of Ivory, womens hair. The herb Pionie or Thorough-wax, planted where Vines grow, drive away worms. Some there are that boyl Asa fetida, and Lazerwort in Oyl, and annoynt the stocks of Vines with it (beginning at the root) or with Garlick bruised. The seeds that must be sowed, should be kept in a Tortoise-shell, or Mints are to be sowed amongst Pot-herbs, but chiefly Tares. The bruised leaves of the Cypress-tree mingled with them, will avail much. Aggregat. And Palladius saith that all seeds will be free from worms, if a little before you sow them you soke them in the juice of wilde Cucumbers. Pliny bids to prepare seeds of Lupins before you sow them, in the smoke or some hot place, because in a moist place the worms will eat up the middle of it, and make it barren. Varro saith that worms will never touch Onions that are set with salt and Vinegar. Moreover, the seeds of all pot-herbs wet with the juice of Houseleek, will admit of no worms. Against Weevils, that are a certain plague to Corn, it is good to dawb the walls with lime and hair both within and without. Others do fix two dayes steep the fruit and leaves of wilde Cucumbers in lime water, and with sand they mould it up like plaister, and with that they plaister the insides of their Granaries; though Pliny writes that Quick-lime is a very great enemy to Corn. Some put beas piss to the lime, some worm-wood, juice of great Houseleek, and hops, others powr on the ground Oyl-lees, Herring-pickle, and the decoction of Flea-bane. Strabo mingles Marle. Others report that often fanning of wheat keeps it safe from weevils; but Columella denies this to be true. Cato lib. de re rustica, commendeth Clay mingled with Oyl-lees, and he would have the Granary to be fenced with that. Varro useth it almost the very same way, but he commendeth Clay with Oyl-lees, Maple tree and Corn mingled together. Our English men do deceive and destroy them divers wayes. Some in the middle of the heap of Corn do place brasse Vessels half full of hot water, that the Corn may lie almost up to the mouth bins of the Vessels; for thus they think the weevils are taken or destroyed.

Some shut up an Ant-hill and Ants together in a bag, and after that they powr it forth in a corner of the granary: thus in ten daies will the Ants destroy all the Weevils, and when they are killed, they take them and carry them forth, that are going back to their former house. Also they use to put into that place young Chickens that will soon eat up

up all the weevils. Some sprinkle on salt water where Gattick hath been infested, or Hops, Elder-leaves, worm-wood, Rue, Nigella seeds, wilde Mints, Walnut-leaves, Savoury, Lavender, Southern-wood, Flea-wort, Bean Trifoly, boyld in Vinegar of Squills. They are much delighted with Navev seeds, for the sweetness of them, that they will leave the Corn for that and eat till they swell and break in sunder. Though some may think these things too much, and beside my purpose, yet Hippocrates proves that they are fit for Philosophers and Physicians (*Epistola ad Cræteum*) not only to know the art to describe, gather, lay up, and use Simples, but also in preserving them, and preparing them, and to purge them from inbred or infected venom, and from putrefaction and worms.

## CHAP. XXII.

### Of the six-footed Worms of living Creatures, and first of Lice in men.

A Lowie.

Since God hath given the principality to man amongst living Creatures, we will begin with him. In the first beginning whilst man was in his innocency, and free from wickedness, he was subject to no corruption and filth, but when he was seduced by the wickedness of that great and cunning deceiver, and proudly affected to know as much as God knew, God humbled him with divers diseases, and divers sorts of Worms, with Lice, Hand-worms, Belly-worms, others call *Termites*, finally Nits, and Acaries: *Acastus* Alcmæon, *Rheirides* Pharaoh King of Egypt, *Gassander* son of *Antipater*, *Demetrius*, *Callisthenes*, *Olympicus*, *Scylla* the Dictator, and that river of Eloquence *Herod* knew it to be true that I write, who perishing with a Lowie disease, used Physicks and Baths in vain, for they died miserably of them. Some also write that *Plato* (being elevated perhaps more than he ought, and so wise that he didained others) died of this disease, whence grew the Proverb, *Plato's Lice*. I shall say nothing of *Henry* the second a most cruel Tyrant, and *Theodorus* that propagated *Arianisme*, two Kings of the *Vandals*: I let passe *Arnulphus* an Emperour, and an effeminate *Sodomite*, and *Cæsar Maximus* a filthy Pander, all consumed with Lice, who found that when God commands, the least and most contemptible Creature hath force enough to destroy sinners, and with *Pharaoh* they were compelled to acknowledge this to be the finger of God.



The Name.

The *Hæbreys* call a Lowie *Kishm*, and *Ginnam*, the *Greeks* *Phthia*, *βηθια*, *βηθια*, *βηθια*, the *Italians* *Pediculus*, the *Spaniards* *Picio*, the *French* *Pou*, the  *Germans* *Lust*, the *English* *Lowie*. The *Latines* call it *Pes*, as we read in *Plinius* in *Cureul*. *Whersore* you are a kinde of *Lions*, and like *Flies*, Gnats, Lice and Fleas, you trouble all men and are hated by all, but never do any good. And *Livy* to *Gladiolus*, *Ave*, they Fleas, Wood-lice, or Lice? *Archeus* my, And *Lucilius* when he sees me, he scratches his head, and picks Lice. *Egulus*. Where kill a Lowie is called *Pes*. It is a beastly Creature, and known better in Inns and Armies then it is welcome. The profit it brings, *Achilles* sheweth, *Iliad* 1. in these words: *I make us more of him then I doe of a Lowie*; as we have an English Proverb of a poor man, *He is not worth a Lowie*. The Lice that trouble men are either tame or wilde ones, those the *English* call *Lices*, and these *Cyph-lice*, the *North English* call them *Perry-lice*, that is a peculiar Lowie, comprehending both kinds, it is a certain sign of misery, and is sometimes the inevitable scourge of God. The tame ones that breed of corrupt blood, are lesse, and reddish, from Fleame white, from melancholy and adust humours, black, and from mixt humours they are of divers colours, as *Petrus Gregorius* noted *l. 32*. If you rub them gently between your fingers you shall see them four-square, and something harder, than Fleas, whence in the dark when you take them you may easily finde the difference. They that breed in the head are bigger, longer, blacker and swifter, those that breed in the body are fatter, bigger bellies, slower, darkish white, and marked with blackish streaks. Some constantly affirm that in May they have seen Lice with wings, and that the Locust-eaters of *Lycia*, when they have fed too plentifully of them, after they come to be forty years old, will die with shole Lice, as *Diodorus Siculus* saith confidently. 4. *Aniquina*. *Agatharchides* speaks of these Lice, but he saith they are like to Ticks. They chiefly fasten on the chin, eye-browes, and the privities full of hair, the groin, and the arm-pits, their body is more compact, their rib is larger, they bite more, and tickle lesse. For Tykes will sometimes enter deep into the skin with their nose, that you can hardly pull them out but with the losse of their heads, and they seldom wand der, but they bite cruelly, and make themselves a hollow place, and there they stand fast. Some call these Lice in *Latine* *Cicci*, some mens Ticks, others *Nutures* sicca. *Aristotle* call them wilde Lice, *Hist. Animal* *l. 5. c. 31*. it is harder then a tame Lowie, and is more hardly removed from the place it bites. Our *French* men, saith *Fontenay*, call them *Morpians*, and *Paisa*, the *German* call them *Fenz*, *leuz*, *Gerdanus Felsolan*: they stick very fast to the skin, or bite through the cuticula: they are of a dryer matter, and that which is half rotted

to they are not so swolne, but they are more compact. The *Arabians* call them *Alcorad*, *Guardam*, *Fach*, and with an Article, *Alguardam*, and *Alfach* as *Ingraffia* observed. Also in the Synonymes contr. *Rheis*, they are called *Motes* and *Immores*. The *Italians* call these *Piatola*, and *Chacillos*, and *Albivexar* *Platula*. All Lice breed from humours, flesh, fat, sweat, corrupted, and differ exceedingly in respect of the place and humour. For those that breed of mans blood will die if you smear them with the blood of other Creatures. Also they that breed in a mans head will hardly live, or not long in his body. So the wilde Lice bred in the privities will die in the head. Those that breed of flesh putrefied, such as often will be bound in Ulcers ill cured, will not be fed with the excrements of the skin, (saith *Hieron*. *Mercurialis* *l. 1. c. 7. de morb. cut.*) The opinions of Authors are divers concerning the generation of this disease: *Aristotle* *5. hist. anim. c. 31*, thinks that Lice breed of flesh corrupted, in which place he affirms three things. First, that they breed Lice, have some pulses arising before in their skin, which if a man prick, the Lice will appear. Then that this disease come not, but by moist humours, or to such that have been troubled with a long and moist disease. Lastly, that all Birds, Fish, Four-footed beasts, are molested with this disease, except an Asse. The first opinion pleases me not: First because in the skin of the head Lice breed most commonly, where there is the least portion of flesh. And again, if they should breed only of corrupt flesh, the heads of young children that are almost allwayes full of them would be so wanting of flesh, that it would almost waite away. Further, in Consumptions, where the body nourishes not, and is wholly consumed almost, they abound most commonly, where all the flesh is so dry, that there is no moisture almost to breed Lice. *Theophrastus* is of another minde from *Aristotle*, affirming that Lice breed of corrupt putrefied blood; which *Hieron*. *Mercurialis* in the quoted place labours to infringe by these reasons. First because in Feavers that grow from putrefaction of blood, there is seen no such increase of Lice. Secondly, if they should be made from blood, some of them at least would be of a red fangine colour, and resist from whence they were bred, as other things doe, but we see no such, therefore, &c. In which place this otherwise very learned man, seems to beg his principle. For in the heads of our children we oftentimes finde very red Lice, and in those that are upon recovery of a putrid Synochus, we finde that oftentimes many red and mingled coloured Lice breed. *Galen*, *l. de comp. med. sec. lib. c. 7. and Avicenna* *l. 4. fen. 7. trait. 5. c. 26*, ascribe them to some other cause, and as *Mercurialis* thinks, that their opinion is the truest of all, namely, that they breed from the hot excrements of the second and third concoction putrefied, nor sharp nor bad. To understand rightly their opinion, we must know, that when blood is changed into the substance of the Limbs, many kinds of excrements are produced, whereof some are dissolved by insensible transpiration, others by sweat, others turn to filth, others stay in the skin: Those that are retained in the upper skin, make dandruff, if they stay in the depth of the skin, or are bad and sharp, they cause fore heads. But since I have observed that in some that were in a Consumption incurable, where the sharpness of the humour eats up the very roots of the hairs, Lice come forth abundantly, why may I not think by their leave that they may breed at first from sharp humours? *Scaliger* would prove that Lice breed not from putrid humours, because he says grow from the seed without putrefaction: for he thinks the principle is altered, but he believes not it can be corrupted. But by his leave I must say that *Scaliger* or the *Apothete* must be mistaken. For so *St. Paul*, *1 Cor. 15. But which thou knowest is not quickened unless it be*. But if death be a corruption, as the Philosophers say, then *Scaliger* was deceived, and yet keeping the Laws of friendship I may nevertheless reject his opinion. And Epithymum breeds from Thymes, and Mistletoe ariseth from some trees, that are found, and not yet corrupted. But I answer, that a Lowie differs more from the principle it proceeds from, than Epithymum doth from Thyme, trees from Mistletoe. For these are of the same kinde, and are as it were thrust forth from the abundance of fruitfull matter, and Mistletoe is nourished from the pith of the tree. But it is apparent, that Lice seldom breed in sound bodies, or not at all, but those that are cachectically in Consumptions, and full of putrefaction, and watry blood, and whose flesh and skin are corrupt as well as their blood and fat, are troubled with them. Oft times found men sweat, and yet breed no Lice, for they will not breed of all sweat, but from corrupt sweat, and that which is not bitter. But when it grows bitter, (as we finde it in those that are dying, or troubled with the Jaundies) they forsake their stations and creep from the body into the pillows that are under them; yet they do not alwayes go to other places when men are dead, for as those that take care of the dead Corpses affirm, they will still flick about the mouth of the stomach, and under the chin by the sharp artery; which places which are most full of native heat, when they once creep unto, it is no small sign of death approaching. Also the complexion serves much to breed Lice, the Countrey, and the dressing. For some have more, some fewer, and some in any Climate will be free from them. *Ovidius* *l. Nativ. c. 82*, writes, that Christians in the *West-Indies* have not so much as a Lowie in their heads, and yet the *Indians* (to use *Plinius*'s phrase) are very Lowy, pediculi. Also our Countrey-men have observed, that have passed upon the *Indian* sea, when they have left the Isle of *Acrois* behinde them, all the Lice presently die, and when they see those Islands again, they will revive abundantly. I think the reason is, (that I may here help *Pennin* out) the extreme heat between the Tropicks, that not only sucks aliment from them, but the Element also. *Vesputius* testifieth of the

of St. Thomas, that the Blackmoors there are full of Lice, but the white men are free of that trouble. As for dressing the body: all Ireland is noted for this, that it swarms almost with Lice. But that this proceeds from the beastliness of the people, and want of cleanly women to wash them is manifest, because the English that are more careful to dress themselves, changing & washing their shirts often, having inhabited so long in Ireland have escaped that plague. Hence it is that Armies and Prisons are so full of Lice, the sweat being corrupted by wearing always the same clothes, and from thence ariseth matter for their original by the mediation of heat. So those that keep no diet, but delight in eating and filthiness, and feed on Vipers, Radishes, Basil, Figs, Lignum Aloe, Garden Smalage, and Dates too much, their bodies will from putrefaction of humours breed Lice between their skin, as *Diodorus in Empiricus*, *Simon Sethi*, *Actius*, and *Pliny* affirm. But *Diocorides* saith it is exceeding false, that Lice will grow from eating Vipers. Sheep's-wool that a Wolf hath killed will breed Lice; if a garment made thereof be wet with sweat, which grant that it be an invention of *Aristotle* and *Pliny*, yet experience teacheth us, that clothes smeared with Horses grease, will breed Lice presently. *Ælian* saith that he will be full of Lice, who is anointed with oyl wherein a Stellio is drowned.

Prevention  
and Cure.

Against this terrible disease, which the Greeks call *Phthirus*, many have invented divers remedies. The Irish and Island people (who are frequently troubled with Lice, and such as will fly, as they say, in Summer) anoint their shirts with Saffron, and to very good purpose, to drive away the Lice, but after six months they wash their shirts again putting fresh Saffron into the Lye. But *Anigonius in Synag. Histor. Paradox.* so soon as little pushes or wheels appear upon the body, bids us pick them, and take forth the Lice: but if they be left unpicked, that general lowlie disease will come, whereby they say that *Alcmeon Physicus*, and *Pherecides Syrus* were destroyed.

#### The general Cure of the lowlie Disease.

*Amatus Lusitanus* cured that good Venetian at Ancona (of whom I spake before) who was sick of a general lowlie disease. First, by opening a vein, and then purging him; so for he drove forth the corrupt humours that fomented the disease, not at once, but twice or thrice. Afterwards by applying Topical remedies, in a short time he grew free of this plague. Topical Medicaments were made thus: Take bitter Lupins iij. pugils, seeds of Staves-acre ij. pugils, in the sharpest Vinegar what is sufficient, boyl them, and with that Vinegar wash the body from head to feet, then wipe and dry it, and anoint it with this ointment following: Take Staves-acre two parts, Sandarach of the Greeks one part, the finest Nitre half a part, mingle them all with the sharpest Vinegar and oyl of Radishes, and pound them together very exactly, and with these make an ointment: with which *Amatus* soon attained his purpose, that the sick fell no more into the same lowlie disease. *Amat. Lusitan. cent. 3. curat. 8.* Herod. (as *Josephus* and *Ægeippus* testify) when he had got this disease by his great pride, and he was so smitten from God, he went to the Baths beyond Jordan, and the Bituminous Lake, that were very good to cure this disease, but at that time they were of no force, when God was pleased to punish a proud Prince with a contemptible creature. If the body be lowlie all over, it shewes a general Cacochymia, wherefore it is best in my opinion, first to open a vein, and then to give a Purg, as the humour requires, and so to proceed to specifics, and such as agree with the place affected. *Diocorides* prescribes such kinds of internal remedies: Take Garlick with the decoction of Origanum: drink this three daies. *Others* Let the sick drink Coriander bruised with Origanum, and anoint himself outwardly with Honey. He commends also Alum-water, and the Decoction of Beres, juice of Ivy and the gum of it with Honey, liquid Pitch, Alum, Synopex smeared on with Vinegar, Nitre with Samian Earth and Oyl.

*Other outward Remedies that kill Lice*, out of *Pliny*: Seeds of Staves-acre beaten, without the hulls, will free the body from Lice, but better if you mingle them with the Sandarach of the Greeks, Mustard-seed, Garlick, with Vinegar and Nitre are good for the same. Oyl of Radish doth cure the lowlie disease contracted for a long time. Siler, Mountain-fee, beaten with Oyl, Hytop, mingled with Oyl, Tar, sweet Gums, the juice of the wilde Vine, and Staves-acre boyl'd in Vinegar, will free garments from them. So black Hellebore with Oyl or Milk anointed on is very good. *Internal Remedies out of Pliny*. A Snakes cast skin powdered and drank for three daies, will keep the body free from Lice. Mustard-seed, or seed of Tamarisk, drank, are good; so is water of Radish-leaves, and the juice of Privet-berries, Plantain, Garlick, the juice of wilde Cucumer, and Tar. *Nemes* commends the root of the sharp Dock, bruised with Oyl and anointed, first washing the body with the decoction of Lupins, and he prescribes a remedy of Sandarach of the Greeks, Nitre, and Staves-acre. *Oribasius* approves the juice of Pellitory long rubbed on, or Nitre with the wilde Vine in a Bath. *Rhais* prefers the leaves of Barberies, gum of Ivie, great Knot-grass, and Sea-water. *Avicenna* commends Quicksilver with oyl of Roies, and wilde Staves-acre with Arsenick. *Haly Abbas* bids us purge the body, and then to eat meat of good juycy, to wash away the filth, and to change our clothes often: then he prescribes Quicksilver bruised with Staves-acre-seed, and oyl of wilde Saffron, and with that to anoint the body morning and evening, after bathing. He farther commands us to use these Remedies: Take long Birthwort, bruise it with Pine-leaves and Quicksilver, and with oyl of Lupins what may serve turn, make an Unguent. Anoint the body with that at night, and in the morning wash it

with hot water, after that, with a decoction of Alum, Wormwood, Smonicum, or Migwo, rub it away. *Another*: Take round and long Birthwort, red Arsenick, that is the Greeks Sandarach; and with oyl of Ben. make an unguent, with this anoint the body in the evening, and in the morning rub the body with Bran and Barley-meal. *Another*: Take bitter Colts, Cardamomum, Buls gall, bray them with the Oyl of Pitchaces, anoint the body with it, and in the morning wash it with the water of a decoction of clear Bran, or of Barley. *Constantinus* used Quickilver with ashes, Litharge, Vinegar and Oyl mingled together for hot complexions; but for cold he used Pine-tree juycy, Sea-water, Staves-acre, Nitre, Arsenick, and oyl of wilde Saffron. *Johannes de Rupe* saith, mingled Quickilver with Aqua vitæ, and the powder of wilde Staves-acre, with that he provides a girdle, which worn about the bare loyns will kill the Lice. *Serenus Avicennæ*, *Amatus Lusitanus*, *Matthiolus*, *Hildegarde*, *Johan. Vigo*, and others, prescribe other remedies, but most of them of these materials. He that desires more remedies against the lowlie disease, let him read *Paulus Ægineta* l. 3. c. 3. *Galen* l. 1. de comp. med. sec. loc. and *Guiliel. de Saliceto* l. 1. c. 48. I knew one (saith *Pennus*) who when he was Governour of an Hospital, he cured the lowlie disease thus: He whipt the sick till the skin came off with Birch-rods, and where the pints were, the Lice would never breed again: A new kinde of cure, and most fit for idle Sea-men and slothful companions. *Amatus Lusitanus* (if I do not mistake) tels of a poor man that had a hole in his back by reason of an Ulcer, out of which daily abundance of Lice crept; questionless they were bred between the skin and the flesh, and afterwards by an unguent of wilde Staves-acre, Quickilver, Pepper, and Lard, he was cured. *Roland* prefers the Balsam of Sulphur to all remedies, and not without cause.

*Actius* writes, that wilde Lice must first be picked out with great diligence, then the place must be fomented with warm Sea-water; yet very warily if they stick in the eye-brows; that you hurt not your eyes: then apply this remedy: Take Alum Scith ij. drams, Staves-acre j. obolus, Pepper j. obolus, burnt Brals j. dram, Myrrhe ij. oboli, Scith-stone ij. oboli and half, Misy torrefied j. dram; bruise it and dry it, and so use it: Then let them bathe and heat their head with dicutients and strengthners, wash the whole body, and rub it again. Our Countymen pick them out, and then they anoint the places well with black Sops, and if the body were too hot, anoint the body with the pap of a sweet apple mingled with Quickilver, and it is a certain remedy. *Celsus* saith they offend the eye-brows so much sometimes, that the eyes being ulcerated they dim the sight, then incorporate purified Quickilver with tops of Wormwood, and old Hogs grease, for nothing doth more certainly cure one, if it be done with caution. *Alto* takē Aloes j. ounce, Ceruse, Frankincense, each v. ounces, Lard what may suffice, make an unguent; some mingle with this Quickilver and Brimstone. But here observe, if Crab-lice do breed thick on the beard, eye-brows, the share, and *peritonæum*; first all the hairs must be shaved off, so soon as a general purgation hath been taken, and then the forementioned Topicks must be applied, and all galls, especially Buls gall, Calfs gall, Capons and Partridge, with juycy of Centaury and Quickilver, are held very good. A lye of the ashes of Tamarisk destroyes the Lice. *Rhais* and *Albertus* commend the marrow of a live Vulture taken forth. *Varignana* useth the milk of the greater Bindweed, wilde Mints, and Sow-bread, with a lotion of Honey. But chiefly he extols this Medicament: Take Staves-acre ij. ounces, Wine iv. glasses, Hogs bristles ij. ounces, purged Quickilver j. ounce, let them boyl, and foment the body with the decoction. *Marinellus* and many others make great reckoning of Wine-tees, juycy of Broom, a Lixivium of Sena, Acorns, Cassia, Pellitory of Spain. But *Gilbert* an Englishman burns Leeches and Sytrax Calamita together, and with these and Hogs bloud, he prepares an excellent Unguent.

These filthy creatures, and that are hated more than Dogs or Vipers, by our daintiest dames, use of Lice are a joy to those that are sick, and sometimes a cure. For they that have lain long sick of a putrid disease, when Lice breed in their heads, they foreshew the recovery of the sick. For it is a sign of the exhaling of it, and flying forth from the centre to the circumference. Also experience proves that the Jaundies are cured with twelve bruised Lice drank with Wine. *Pennus* gave Lice and Butter to beggars and such as live on alms, very often, and so he recovered some that were almost desperate; some for the Dyurie are wont to put into the yard living Lice the greatest they can, to draw forth the urine by their tickling: which *Alexander Benedictus* relates of Wig-lice, when clammy humours have hurt the eyes, some cleanse them with Lice put into them, which creeping here and there like *Oculi Christi*, collect the matter; and wrap up in that they will fall out. Also what shall I say? Apes, Baboons, will feed on them. And *Herodorus* and *Serabo* in *Pennus* speaks of men that feed on Lice, (so whom *Arianus* in *Periplo* consents) and the Spaniards speake the same of the Inhabitants of the Province of *Cuenca* in the West-Indies, and they hunt after them so greedily and desire them, that the Spaniards can hardly keep their slaves from feeding on them. And it is no wonder that they can feed on Lice, that devour Horses, Ases, Cats, Worms (and more than that) men that are raw. But because it is an idle work, these women have that task put upon them to catch Lice, and they do that work almost, and therefore *Serabo* calls them *Pedilegæ*. *Serenus* makes another use of them, and writes thus:







median God thought hurtfull, mans posterity hath found beneficial. Indeed wall-worms are of a corroding quality, yet have they place in Physick; for taken with the blood of a Tortoise they cure the bitings of Serpents. By their smell the Epileptic that ariseth from the strangling of the Mother, is dissolv'd. Inclosed in an Egge or Wax or a Beem, and swallowed, are good for an Impostume, and a Quartan Ague, and will help them (saith Pliny, *Disforides, Galen, Marcellus, Aetius, Alvarius*.) Drank with Vinegar or but smelt to, they will remove Horleeches that stick too fast. Also the Verbes of *Quinum Serenus* shew that they are good for Tertian Agues.

*Some say to drink three Wall-lice mixt with wine,  
And Garlick bruised together at noon-day.  
Moreover a bruist Wall-louse with an Egge, repins  
Not for to take, 'tis loathsome, yet full good I say.*

*Gesner* in his writings confirms this experiment, having made trial of it amongst the common and meaner sort of people in the Countrey. The Ancients gave seven to those that were taken with a Lethargy, in a cup of water, and four to children. *Pliny* and *Serenus* contents to it in these Verbes.

*Some men prescribe seven Wall-lice for to drink,  
Mingled with water, and one cup they think  
Is better then with drowsy death to sink.*

And he of old sang, that bleeding at the nose would be stayed with the only smell of Wig-lice. Some there are, that cure dark sights by reason of a Cataract, bruising these with Salt and Asses milk. Many अन्यत् painful ears with honey mingled with Wall-lice, to good purpose. Also *Marcellus* saith they stay vomiting; and he saith it is a certain remedy, if a bruised Wall-louse be swallowed in a rear-egge, by one that is fasting, and knowes nothing of it. *Pliny* seems to prove from thence, that they are good against the stings of all Vipers, Adders, and all kinde of Serpents, because that Hens that feed on them, are free from the stinging of these Creatures. *Aetius* commends Wall-lice against the Strangury, and to drive forth the Stone. *Vegetius* in this case puts the Wall-louse into the ear; another into the passage of the Yard, and with a gentle friction of the parts, he affirms that they will presently make water, which remedy he seems to have borrowed out of *Hierid* in his Hippocratick. *Galen* Exp. 5. reports, that Wall-lice will not only provoke urine, but also drunk for nine dayes space, will stop childrens water that goes from them against their wills. *Valerandus Doreus* an Islander, a most learned Apothecary of *Lyma*, often said, that these drunk with water hot, or wine, or broth, would wonderfully help those that were troubled with the Stone. Moreover, the later writers wonderfully commend the ashes of them with a fit decoction cast in for a Clyster, to bring forth the Stone. If they be bruised and annoynted on the passage of the yard, it will presently provoke urine. *Marcellus* There are saith *Gesner*, that for the Colick prescribe four live Wall-lice to drink in wine, in the morning, and then they command to fast two hours after, and they give as many to drink two hours before supper, and so again the next day untill they have drunk up twelve Lice: truly it is a remedy to be despised, but it is no new remedy in that desperate disease, and it is a present cure. It helped *Fundulus* the Governour of *Zarick* at the second taking, and so it did some of his Kindred also, and he was like to have written a commendation in praise of Wall-lice. *What concerns outward diseases.* If you pull up the hair by the roots, and annoynt the part affected with the blood of Wall-lice, and let it dry, it is the opinion of *Galen, Aetius*, and *Nonus*, that they will never grow again. *Pliny* saith that if you annoynt the breasts with Goose-grease and Wall-lice, the pains will abate, the Moles of the matrix will break forth, and scabs of the privities will be cured. *Connelius Gemme* in his Appendix of his *Cosmographie*, speaks of a woman in whose Skull opened, were found abundance of Wall-lice.

## CHAP. XXVI.

### Of Tikes, and Sheeps Lice.

The Tike in *Latine* *Ricinus*, in Greek *κρινος*, *Hesychius* calls it *κρινος*, *Suidas* *κρινος*, and others call it *κρινος*, *Synonymus* calls it *κρινος*, but that is not right, for it wants wings. The Arabians call it *Albarad*, *Alfasser*, *Albalm*, as *Bellunensis* reports. The *Fornis*, saith *Hermolaus Barbarus*, to this very day call Tikes *κρινος*, as we read in *Dionysius Zelonotus*. It is called *Ricinus* in *Latine*, because it is like the seed of the Plant *Palma Christi*. *Gaza* calls it *Reduvius*, and *Albertus* sometimes calls it *Tarax*. Also *Albertus Vincentius*, *Guillemus de Conchis*, call it *Engulam*. I think that at first it was called *Cicra*, saith *Scaliger*, because *Cici* is the same with *Croton*. The *Indians* call it *Zevo*, the *German* *Holzbock*, the *French* *Plata* from its compact body, the *English* Wood-teck. Some distinguish between *Ricinus* and *Reduvius*, thus very exactly.

*Ricinus*

*Ricinus* is a small Insect, that when Summer comes on breeds in pastures among grasse, and in Woods amongst the leaves, of some putrid humour: with a very compact body and that feels plain, with a skin very tough, of a Diamond figured body, of a black shining colour, or a dark brown; but so soon as it is taken to any living Creature, and thrusting its head within the skin, it draws the blood, in a short time it grows great and swells, and at length becomes almost round. It hath six feet fastened to its neck, with a sharp nose, but short; it produceth no young ones, nor is it produced by other living Creatures, and in this it differs from all other Insects, that it is filled with food abundantly, and yet there is no passage for any excrement, and therefore it may be the *Hermolaus* calls it *Cana*. Yet therefore the material Philosophers that with *Aphrodisius* draw all things from the manifold qualities of the Elements, consider diligently, to what default of matter or confusion they will be here forced to fly. If they imagine, that Nature wanted a bodkin to pierce a hole in the tail, they deserve to be hissed at. But rather let them here see and acknowledge the shape of *Parasitus*, That bodies may be made from Spirits, and Spirits from bodies. *Pliny* calls a Tike a filthy Creature, the end of whose gluttony is, as to gluttons amongst men, death it self. For in a few dayes it will break with over-fullness; yet it will fast lustily for seven dayes. *Hieracius* transfuseth to *Salvages* who suppose Tikes will breed in mans beard and groins, for being there fastened it will stick close to feed it self: yet *Inhabitus* and *Hesychius* are of his side in these words. It is called a Tike, because it sticks fast to what it is bred in. But the truth is, a Tike is not bred in living Creatures, but from the corrupt matter of leaves and grasse as I said before, and as *Aristotle* affirms, *Hist. 5. c. 19. Tikes* breed of Plants. May be *Stalger* meant by a Tike some Louse like a Crab, or some Crab-louse in man; for they both breed in the beard and privities, and can very hard be pulled off. It cruelly plagues men and Oxen, but especially barking Dogs. *Cato* also testifieth that Sheep and Goats are troubled with Tikes, but he was deceived by the likeness of their bodies; for that Louse of Sheep should be called *Ricinus*, our Countrey-men say (a Sheeps Louse) between which and a Tike there are many and different marks. For a Sheeps Louse hath a long little beak, and its body when it is full is never so distended but being pressed, it will never seem round. Also the feet of this are of a dark red, the back Ash-coloured, marked with three black spots, and is framed after the fashion of a heart. The head is not always but sometime fast in the skin, and it draws blood forth but by turns; and it voids the excrementa that breed of it by the tail, and it will dy Wool of so deep a green, that this cold tincture shall scarce be blasted in a hot dying Fat. Sheeps Lice will live a whole year in thorn Woads; but Tikes live only upon the hot blood of the Creature. Let therefore *Cato* maintain them both to be of one kinde, yet truth will maintain a vast difference between them. *Serius* is a little Creature, like to the swellings of leprovous people, saith *Albertus*. *Gesner* doubts whether he understand by that a Tike or a Breez; I rather think he meant a Tike, both from the round form of the swellings, and from their wan colour. *Cato* frees thorn Sheep from Lice with Oyle of Wall-potatoes, and the best lees of strong wine, and a decoction of Lupins added to them, and annoynting them with it, then let them dry two or three dayes, and after that wash them with Sea-water. The English Shepherds treat them, and then annoynt them with Tarre and Sheeps suet; or else they bruise the root of *Acorus*, and boyl it in water, and they annoynt their studies with the warm decoction. Some use nothing but Tarre, others use the root of *Mandragora*, but *Cato* must be had that the Sheep taste it not, for fear of the great danger of Aspiration that it will cause. Others boyl the root of Cypress, and with that boyled they wash their Sheep. *Diophrastus* is *Geopon*. Against Dogs Lice the Ancients bid us to annoynt their ears with Oyl of bitter Almonds and of Walnuts; experience confirms that remedy. Also *Nemesianus* testifieth as much.

*\*Th good to nymt their ears, and set them in the Sun,  
Or use a red hot knife, when Lice are first begun.*

*Rhsus* comments against *Aschardus* of Dogs or Dog-lice, to wash them with Wine, and Vinegar, Cammian-seed and Salt-water. *Theophrastus* and *Cato* prepare oyl of bitter nuts, and wish that they annoynt their claws and ears, and secrets also. Tarre of Cedar kills them. *Disforides*. But *Columella* forbids to pull off Tikes from Oxen and Dogs, lest the places should exulcerate, and he highly commends Tarre and Hogs grease. *Pliny* saith the juice of both Chamzeleons will destroy them. *Albertus* reports that Tikes blood will cleanse Ulcers, and if they be infused in wine they will presently make one drunk. *Serenus* farther commends them for to cure a Fistula in the ano.

*If that new worms in the secrets chance to breed,  
Chew'd Bramble-leaves apply, you quickly shall be freed.  
Or if from an old sore a Fistula do grow,  
A Wasps ashes burn will help; and further know,  
The blood of an Ox Tike is no means else belov'd.*

Also

The Use.

Also the blood of a Tike will cure the Shingles. Also men say, that a Tike pulled out of the left ear of a Dog, if it be tied on, it will cure all pains. *Pliny* writ this out of *Nigidius*. Also he asserts that if a woman loynes be annoyed with the blood of it, she will abhorre venery. Moreover nine or ten Goats Tikes taken in wine, will stop the terms. *Disorder*. Annoy your eye-lids with the blood of a Tike taken from a Birch, the hairs being first plucked off, saith *Galen*, *Simpl.* 10. c. 5. and they will never grow again: So also *Pliny* and *Avicenna* write, but it is from other men's opinions. *Diagnosus Moleficus* prescribes such a Depilatory against pricking thorny hairs: Burn a Sea-hare in a new earthen pot, and keep the ashes with Tikes blood in a horn box, use this, first pulling out the hairs. Many English men have learned by experience, that one dram and a half of Sheeps Lice given in drink will soon and certainly cure the Jaundies.

## CHAP. XXVII.

## Of the Garment-eating Moth.

*Pennius* beginning to write the history of this Insect, saith that *Tinea* is a word that signifies many things; as Lice of Hawk-weed according to *Albertus*, Wood-lice in *Plinius*, the plague of Bee-hives in *Virgil*, and it signifies the creeping ulcers of the head, that are eaten like to garments, whence it may be *Claudius* writes;

The filthy Moths have gnawn the loathsome heads.

*Gana* translates *Tinea*, but very ignorantly, as we observed in the history of Caterpillars. Also *Pliny* saith that *Tinea* do destroy the seeds of Figs, he means the Worms that breed in Figs, from whence grow *Thrus*. *Niphus* calls that little Scorpion which eats books *Tinea*, whereof I spake in the history of Scorpions. But *Est* and *maius*, if a man will speak properly, is a Worm that eats garments. It is called in *Latin* *Tinea*, a *tenendo* from holding, for it sticks fast in garments, and will not easily change its station. The French call it *Teigne*, the Spaniards *Thia*, the Italians *Tignola*, the Muscovites *Mel*, the Polonians *Mel*, the English *Moth*, the Hebrews *Hafsch*, and *Sas*, as you shall finde it *Job* chap. 13. and *Isai* 51. It is a little Worm of a wan white colour, of which ariseth that small kinde of Flea that will fly at night about the Candle-light. There are some of them that are silver-coloured, the English call them silver-moths, the Dutch *Schietes*, from their swift motion. *Niphus* greatly erred; making this the Scorpion amongst Books. There is also a certain Worm that is thick, or with a coat, saith *Pliny*, called *Tinea*, that draws its coat along with it, as a Snail doth its shell, and when she is deprived of this she presently dieth. But if this coat grow too great, it changeth to a *Chrysalis*, out of which at a set time a little Glow-worm comes. This kinde hanging by a thread, hangs a long time in houses before it changeth to an *Aurelia*. It hath a little black head; the rest of the body is a whitish dark brown, the Case of it is something long, made almost of a Cobweb, not round at all, but lightly compacted, and at each end something hairy. The Phalenz that come from thence stick by the feet to the roofs of houses, untill their bodies being corrupted and putrefied they are bred again: when their bodies corrupt, and their wings and feet fall off of themselves, they hang with a thread by the tails. As length they get a Case and are turned into this kinde of Moth. In Germany and *Hannota* there is a Moth of a sad red colour, with a little thick head, the body grows by degrees smaller even to the tail. The colour of its belly is lighter, something yellow, and like a soft downy silk. It is a very tender Creature, especially that which is silver'd over, and it is bruised to pieces if you do but touch it. Whence that Kingly Psalmist, *Psal.* 39. *When thou with chastisements shalt correct man, thou makest him to consume away as a moth.* And *Job*, Chap. 40. he amplifying the certain destruction of the wicked: *They shall be bruised* (saith he) *before the Moth*. All Moths are reckoned amongst the number of six-footed Creatures, and they breed in Garments as well of Wooll, as skins that are not cleaned from dust and filth: and so much the sooner if a Spider be shut in, as *Arifolius* writes. For the Spider drinks up all their inbred moisture, and dries them; wherefore care must be had that garments be not layd up full of dust, and when the Air is thick and moist. Some to avoid Moths, ventilate their garments in the hot Sun-shine: which our women severely forbid, and lay them up in the shade, and when the wind is high and very cold. For they hold that the Sun-beams are kindly for Moths, but winds and tempests and the shade are enemies to them. These Worms when they have by degrees insensibly eat off the outmost superficies of the cloth, then they eat up the inward part, and so insinuate themselves into the middle substance of it, that those that search never so well for them can hardly finde them. The Ancients were most expert to kill Moths. For the garments of *Servius Tullius* lasted to the destruction of *Sejanus*, for they were kept with so great diligence by the keepers of the Wardrobe, that they neither consumed by age, nor were Moth-eaten. They that sell woollen Clothes, use to wrap up the skin of a Bird called the *Kingfisher* amongst them, or else hang one in the shop, as a thing by a secret Antipathy that Moths cannot endure. They are handsomely destroyed by the sent and smoke of Savin, Hops, Finger-hood, Wormwood, Rosemary, Poley, Panax, Anised, Golden-flower, Pomegranates, Citron-

pills, (for this was the chiefest use of Citrons in old time) the out-landish Myrtle, Cedar, Cypress, Calamint, Brimstone, Downy feathers. The Books that were found in *Nama* his Tomb, were said to be annoyed with the juice of Cedar: wherefore as *Pliny* writes, they were supposed to be free from Moths above 530. years. The bones of *Bergerius* (I know not what healt it is) being brought to powder, and strew'd amongst garments, will drive away Moths, if we will credit *Hildegard*: *Rhassus* reports that Cantharides hung up in the middle of the house will do as much: Who saith moreover that garments wrapt up in a Lions skin, will never have any Moths. Some wet a linnen cloth in a strong lie, and dry it in the Sun without pressing it, and they affirm, that clothes wrapt in that will not be Moth-eaten. Cats bid sprinkle your Wardrobe with Oyl-les. That which *Pliny* reports is a wonder, that a Cloth laid under the Bier of a dead body, will never have Moths to hurt it. The richer people, who (as *Horace* writes)

Whose hangings rot in Chests, rich for the Worms and Moths,

take diligent care in Summer to look up their garments, and taking them out of their Coffers, they air them in open place for the winds, and then they beat off the dust with the leaves of *Indian* Miller, or Hogs bristles, or Broom Moss, or with Worm-wood branches. Of old they were wont to do it with an Ox tail; for so *Martial* writes;

If that with yellow dust thy costly clothes abound,  
Thou must with an Ox tail brush'st off upon the ground.

There are also rich Merchants, that have Cedar and Cypress Chests, and they put up powder of *Origanum*, Worm-wood, *Orris*, Citron-pills, Myrtle-berries with their clothes, and by such remedies they drive far from them this Wooll-devouring Creature.

We writ before amongst the six-footed Worms, of Worms in books, wood, the skin, the fruit devourers. I have nothing more to add to this Chapter, but only to exhort rich men to lay up their treasure there, where neither Moths shall eat their garments, nor rust consume their Silver; and let them in the mean time leave off that infinite expence in clothes, of which can they look for any better end, to use the words of the *Lyrick* Poet,

Thou to feed black Bugs, and the Lazy Moths?

If a man, saith *Calvin*, born of a woman, having but a short time to live, and alwayes waxing old, and corrupting, would think himself to be like a garment that Moths eat, certainly he would lay aside all pride, and blush, and fall lowly upon his knees unto Almighty God.

## CHAP. XXVIII.

## Of the Flea.

The Latin word *Pulex*, in Greek *ψύλλα* or *ψύλλος*, comes saith *Isidore*, from *Pulvis*; dust, or the son of dust; in Spanish *Pulga*, Italian *Police*, French *Puce*; English *Flea*; the Germans from its nimbleness in flight call it *Floch*. Fleas are not the least plague, especially when in greater numbers they molest men that are sleeping, and they trouble wearied and sick persons; they escape by skipping from us; and so soon as day breaks they forsake the bed. They are a vexation to all men, but especially, as the wanton Poet hath it, to young maids, whose nimble fingers, and that are as it were clammy with moisture, they can scarce avoid. These Fleas are either common or extraordinary. The common ones are small Creatures about the bignesse of Lice, but their bodies are softer, and they are bunched back, almost like a Hog, they are black and shining, their breast and belly is yellow from black, in white Dogs they are more clear, in red more yellow, in black Dogs blacker than in others. Here I desire you to observe the wonder of Nature, that their hinder little legs are bent backwards toward their bellies, and their forelegs toward their breasts, as four-footed beasts are, as it is usual almost in all Insects to whom Nature hath given but four feet. It may be for that end the joints of Fleas are so disposed, that they may with the more ease hide themselves in the long foldings and plights of the blankets from those that hunt after them. The ends of their feet are divided into two parts, and are hooked and sharp, and seem as it were to be horny, not only that they may more surely creep up upon high places, but also that they may sit and stick faster to the smooth skin: They have a little head, and a mouth not forked but strong and brawny, with a very short neck, to which one *Mark* an Englishman (most skillful in all curious work) fastned a Chain of Gold as long as a mans finger; with a lock and key to rarely and cunningly, that the Flea could easily go and draw them, yet the Flea, the Chain, lock and key were not all above a grain weight: I have also heard from men of credit, that this Flea so tied with a Chain, did draw a Coach of Gold that was every way perfect, and that very lightly; which much sets forth the Artists skill, and the Fleas strength. The point of his nib is something hard,

hard, that he may make it enter the better. It must necessarily be hollow, that he may suck out the blood, and carry it in. They seek for the most tender places, and will not attempt the harder places with their nibble; with two very small foreyards that spring out of their foreheads, they both prove their way, and judge of the nature of the object, and whether it be hard or soft: where they bite they leave a red spot as a Trophiee of their force, which they set up. In rainy weather they bite sorely, and are bold to run over ever part of mans body. They have but one small intestine with folds inward, which is either relaxed or contracted as they eat more or less. The leffer, the leaner, and the younger they are, the sharper they bite, the fat ones play and tickle men more willingly. It is very probable that they have eyes, both because they choose their places of retreat, and because they withdraw themselves when the day breaks. They will not sit upon corrupt or dead flesh. Those that have the Kings evil, because they are of bitter juice, and such as will die, because of the corruption and stink of the fame, they will not meddle with. At all times they trouble men and Dogs, but chiefly in the night. Though they trouble us much, yet they neither stink as Wall-lice doe, nor is it any disgrace to a man to be troubled with them, as it is to be lowlie. They only punish sluggish people, for they will remove farre from cleanly houses: when they finde they are arraigned to die, and they feel the finger coming, on a sudden they are gone, and leap here and there, and so escape the danger: whilest those that hunt them endeavour to measure their jumps, as *Arifophanes* saith, they but play the fools. In the morning, after they have fed, they creep into the rough blankets, and lick to the walls, or else they hide themselves in the rushes or dust: and so they ly in ambush for Pigeons, Hens, and other Brds, also for men and Dogs, Moles, Mice, and very such as passe by. Our hunters report, that Foxes are full of them, and they tell a pretty story how they quit themselves of them. The Fox gathers some handfuls of wooll from thorns and briars, and wrapping it up, he holds it fast in his mouth, then he goes by degrees into a cold River, and dipping himself in by little and little, when he finds that all the fleas are crept so high as his head for fear of drowning, and so for shelter crept into the wooll, he barks and spits out the wooll full of Fleas, and so very frolicly being delivered from their molestation, he swims to land.

Their first Original is from dust, chiefly that which is moyntned with mans or Goats urine. Also they breed among Dogs hair, from a fat humour putrefied, as *Scaliger* affirms. A little corruption will breed them, and the place of their originall is dry filth. *Martyr* the Author of the *Decads* of Navigation, writes, that in *Perienna* a Countrey of the *Indies*, the drops of sweat that fall from their slaves bodies will presently turn to fleas. Some Countreys are such enemies to Fleas, that if they be brought in thither they cannot live, nor will they breed there; as in the Territory *Tefetor* of *Sigilmumum*. Contrarily the City *Hea* by the sea-side, (unlesse *John Leo* deceives us) is most fruitful for Fleas, by reason of the abundance of Goats, as also *Dede*. In *Hispánia* Fleas are found, but neither many, nor great ones; but they bite more fiercely by farre than ours doe: they love hot places, where the Sun shines. In the Spring they multiply, at the beginning of Winter they die, for they cannot endure the cold. They copulate, the male ascending upon the female as Flies doe, and they both goe, leap, and rest together. They stick long together, and are hardly pulled asunder. After copulation presently almost, the female full of Eggs seems fatter; which though in her belly they seem long, very small, very many, and white, yet when they are layd, they turn presently black, and turn into little Flies, if we may grant what *Penius* saith, that bite most cruelly. *Philoponus* in *lib. de generat.* maintains that Fleas breed not Eggs but Nits, and *Niphus* saith the same: But they endeavouring to prove this because they crack when they are crushed; doth not confirm their opinion, for Eggs will not break under the nail without cracking. *Aristotle* thinks, that from them, be they Eggs, Nits, or little Worms, no other Creature breeds, and I should willingly subscribe to him, but that I think Nature made nothing in vain. Those Fleas seem to be more rare that *India* produceth neer the River *Nigra*, as we learn from *Theophrastus*. They chiefly seize upon the softest parts of the feet: under the nails, and bite venomously. After four dayes they raise a swelling as great as a pease, or a Chick pease, and young ones like to white Nits; and if all these be not forthwith picked out, and the place affected burned with hot ashes, the part will be lost, as it falls out often with the Slaves in *Numidia*. He also in the Province of *Peru* was subject to this mischief, and could not recover but by washing himself in the River very often.

L. 9. *subit.*

Cardan writes of a little Flea. The *West-Indy*, saith he, brings forth a kinde of Flea called *Nigua*, a very shrewd plague. This creature is far lesse then a Flea, that sticking to a man will fo torture him, that move lose their hands, others their feet. Theremedy is, to anoynt the part with Oyl, and shave it with a Razor: To whom *Scaliger* answers thus. Thy story of *Nigua* is lame, yet not unprofitable if you consider Philologie: I shall adde what you have omitted.

*Exer. 94. n. 8.* This little Flea hath a most sharp nib, and invades chiefly the feet, (seldome other parts) not  
*ad subtil. Car-* only when men goe, but lye down also. Therefore the *Indians* lie high. Most frequently they  
*ad. 22.* bite that part which is under the nails. The fourth day the swelling begins to increase, and grows

plenty of Nits bred, they are hardly pickt out with a needle or thorn: and this mischief is cured with hot ashes. Moreover, the slaves of *Africa* that the *Spaniards* have in their families, because they go barefoot, are thrively troubled with this plague, and they breed thick numbers in their feet, that there is no remedy for them but the iron instrument of the fire, whence many of them want their toes or their feet. Fleas will dye from extreme cold, and therefore in the colder winter they are not to be seen; or else we kill them when we can catch them. And one dog will as willingly bite out the Fleas of another dog, as they will scratch one the other. Also moit bountifull Nature hath supplied us with a large held of remedies, that the Fleas that hide themselves, and leap away from us, may be destroyed by us, and we preserved from them. For we have herbs, Dwarf Elder-leaves, Fern-root, or Anchusa, flowers of Penniroyal, Rue, Colquintida, Brambles, Oleander, Mints, Horse-mints, Hops, Rape-feed, Cumin, Steaves-ace, Fleabane, Conyza, Saffron, Coriander, Celendine, sweet Cods, wilde Cicers, Arsemart, Mulnard, Lupins, roots of Chamælea, Hellebore, leaves of black Poplar-tree, Bayes, Walnut-tree, with the oyle of these, or the boyl'd decoctions, if the pavement be sprinkled, or the house be perfumed, the Fleas will be gone, and most of them are killed. Above all, the drugs of Mares-pisse, or seawater are commended, if they be sprinkled up and down; also Harts-horn brest is very good. Goats blood fet in a bason or a pit, draws all the Fleas to it, as also a staffe anointed with the fat of a Hedgehog or Cony, Ape, Bear, Bull, or Fox, will do the like. The water of the decoction of Arsenick or Sublimare sprinkled, is a certain experiment to destroy them. Quicklime mingled with the juice of white Hellebore, doth the same. A Gloeworm fet in the middle of the house, drives away Fleas. Fleawort in the City of *Chित्र* is powdred, and the powder is strew'd about the beds, which by its smell doth astonish the Fleas that they will not bite. If a Flea get into ones ear, pour in Oyl mingled with a little Vinegar or juice of Rue, oyl of Spike, Turpentine, or oyl of Peter; is very usefull. These remedies may serve the turn, which are taken from *Asyrrius*, *Varro*, *Columnela*, *Galen*, *Actius*, *Palladius*, *Avicenna*, *Rhazis*, *Kiramides*, *Gualtimum*, *Placentinus*, *Tonicum*, *Bellemus*, *Hermolus Barbarus*, and *Pliny*. The *Barbarians* (saith *Leven*) that the Fleas may not bite them, anoint themselves with oyl that is thick and red, pressed out of fruits, which they call *Conrog*. *Petrus Galliardus*, *Celins Chalcanignus* and *Tzazares*, are reported to have written the commendation of a Flea; it was my desire to have seen this, but it was never my chance.

## CHAP. XXIX.

Of Insects that want feet, and first of Earth-worms.

Some earthly Insects that have no feet are bred in the earth, some in living creatures, some in plants. *Earth-worms* by *Plantus* and *Columella* are called *Lumbrici*, may be from their lubricity. Also they are called the entrails of the earth, both because they are bred in the bowels of the earth, and because being pressed, like the entrails of living creatures they cast forth excrements, also because they are like them in form and fashion. The Greeks call them *γινί, γινίς, γινίς* *Hefiscius*, and the Syracians, *γάρβας*; the English *Midis*, *Earth-worms*; the French, *Vers de Terre*; the Italians *Lumbrichi*; the Spaniards *Lombric*; the Germans, and those of Flanders, *Erdwurmen*; the Arabians, *Charatris*. *Manardus* writes, l. 2. ep. 4. that Earth-worms were called *Ovisculi*. Earth-worms are greater or lesser.

*The great ones*, are long Worms, almost like those round ones that are bred in mens bellies, half a foot long, and stretched out a foot long; they are of a weak flesh-colour, and for the most part they have a ring or else a collar about their neck that is thick, wherein there is a little blood contained: they have no eyes, for no Worms have any. They first breed of putrefaction in earth, they are afterwards fed by the same, and lastly they are resolved to earth again. Those that you see wraching little hills at the brink of their holes, as I suppose those heaps are their excrements; for in them we finde nothing but earth, the nutrimental juice whereof being spent, they cast forth the rest as unprofitable matter at their doors, and they are senced by it against the rain falling in. At night chiefly when it is rainy weather, they willingly copulate, and stick fast till morning. They are not wrapt together in copulation like Serpents, but they stick fast together by their sides, sending forth a frothy kinde of spittle when they copulate: when they are in conjunction, they keep the middle of their bodies, that is the hinder half in their holes, and they are never so fast glwed together, but with the least motion of the earth they can easily part: in rainy weather they are whiter, unless it be when they copulate, for then especially they are red. *Gesar* saith in the middle of *April* he dissected a female Earth-worm, that was very thick, within the flesh through the whole body, a receptacle defends, that is ringed, covered with a thin membrane: when he dissected it, it stank filthily: in this is the earth contained that they take in; but above this receptacle there lie white eggs very many heaped together, next the mouth.

The lesser Worms, for clearer description sake, I will with *George Agricola* call *Ascarides*, they are frequently found in dung-hills, and under heaps of stones: some of them are red ones, they



The Ufe.

call them *Druggs*, and fishers much desire them; some are war-coloured, others have yellow tails and are so called; some also are with collars and are fat, others without collars and slender, which I take to be the males. They are bred chiefly in Autumn by reason of no plenty of moisture, as *Aristotle* seems to affirm. Both kinds live long in water, but at last they die for want of food. They move from place to place with a certain drawing and pulsation, for the Philosopher saith they do not properly tumble along. The great ones live in the bowels of the earth, especially in the open air, and where men oft-times resort. In the morning when they withdraw themselves into their holes, when the air is clear they fence them with earth cast up, but in rainy weather, they flop them by drawing in some stalk, they feed frequently on earth, but most greedily on a piece of white bread unleavened, as I learned from our *Turner*, a very credible man, and have oft-times seen it. Many of them dye if the Winter be too cold, or the Summer too hot. Moreover they are taken by Fishermen, and driven forth of their holes either by diggings, and shaking the earth, or by pouring in some liquor of strong juice, as of Walnut leaves, Hemp, or strong Lye. It is good also in tempestuous and dark nights to go into gardens silently (which they miserably hurt) and to creep upon them when they couple, by the help of fire carried in a horn: for so in one night thousands of them may be intercepted and killed.

Uses of this despicable creature are observed to be many; and Nature scarce affords any simple that the hath belloyed more virtues on against diseases. For Earth-worms soften, glew together, ease pain, and by their earthy and watry moisture together, they duly temper the part affected. Powder of Earth-worms is thus prepared: Wrap up great Earth-worms for some time in earth-moss, that so they may free themselves of that glutinous matter that sticks on their outward parts; then press their hinder parts next the tail, that they may cast forth their excrements and be cleansed. Then cast them into a vessel of white Wine and a little Salt, and gently pressing them with your fingers, cast away that first Wine: pour on more, and after the Worms are washed, take some part of this away also: for it must not all be cast away, as some would have it, till it be perfectly clear, for so that glutinous clammy quality would be lost with it. Thus prepared, they must be gently dried in a furnace, till they will crumble into dust when you touch them. Then the powder being beaten and feared (it will smell like Runnet or Cheese) must be kept something far from the fire in a glass vessel. Otherwise it is best to kill the Worms cut in pieces in Wine and Salt, and when they are dead, to take them out and to cleanse them. This powder with the Juice of Marigolds, will cure the Epilepsy; with Mead, the Dropsie; with white Wine and Myrrhe of the Troglodytes, the Jaundies; with boyled Wine, Hydromel, or Wine, the Stone, the Ulcers of the reins and bladder; you may give a dram weight. In three cyathi of water they will break inward Impostumes, and bring them forth, if seven or nine of them be brought into powder. They stay also the Dyarrhoea, help Barrenness, bring forth the Secundine that stales behinde, ease the pains of the Hip-gowt, open the Liver, cure Tertian Agues, kill and drive out all Belly-worms, given in liquors or decoctions that are proper for it. Also the decoction of Earth-worms drank with the Juice of Knot-grass or Comfrey, is good against continual pissing, especially if it be also cast in by a Clyster. Also a Clyster of their decoction enter the Emroids wonderfully. Some, where they suspect clotted blood, give the decoction of Earth-worms to drink with great success. For the diseases of the Ears almost past cure, boyl them in Goose-grease and pour that in. Boyled in oyl for the Tooth-ache, and poured into the ear on that side the pain is, as *Pliny* saith, they give ease, or if you drop them into the contrary ear, as *Dioscorides* saith. Thus far for Earth-worms given inwardly, from experience and testimony of *Dioscorides*, *Galen*, *Actius*, *Egineta*, *Myrseus*, *Pliny*, *Valerius*.

Also outwardly applied and bruised, they joyne wounds and nerves cut in sunder, and heal them in seven daies; wherefore *Democritus* would have them kept in Honey. Their ashes with old oyls cleanse corrupt Ulcers; and as *Pliny* writes, consumes the hard edges of them, if it be mingled with liquid Pitch and Simbliek Honey, *Dioscorides* saith Sicilian Honey is called Simbliek. A certain Chirurgeon now in England of good note, makes a liniment of Earth-worms and Honey, wherewith he anoints the tent, and sprinkles it with fine powdered Allum, and puts it into a Fistula, and so brings forth the core eaten out with no pain, and heals the wound. Also their ashes drawes forth things that thicke within, and laid on with oyl of Roses cures Kibe-heels. *Marcellus*.

*Serenus* saith that when the nerves are cut in sunder, it is good to lay on Earth-worms bruised with Hogs-grease that is old and rank. *Marcellus Empiricus* adds Groundsel to the Hogs-grease and Earth-worms, with the tender tops of Box with Frankincense, and this he lays on the nerves cut or pain'd: *Pliny* saith that the ashes of these and of a wilde Moufe, laid on for a plaister, with oyl of Roses, is excellent for broken bones.

For the great pains of Horses in their nerves or joynts, to help them, *Russius*, *Abrysus*, *Didymus*, collect a great number of Earth-worms: whence *Cardan* gathers that they will ease all pains. *Mandella* affirms that contraction of the nerves will be cured if you anoint them with oyl of Camomil that is well replenished with Worms. *Marcellus* saith that the same is done with Honey and Worms, as before. *Actius* saith without doubt they are an excellent remedy for the Gowt boyled in oyl and a little wax: so saith *Marcellus*, but he sometimes mingles Honey with them. *Vigoro* for pains in the joynts, makes a plaister of these and Frogs, to which he adds Vipers-grease.

For pains of the joynts: Take ashes of Worms iii. ounces, oyl of Roses, or Foxes, what may suffice,

suffice, mingle them to an ointment. Another that is singular: Take the marrow of a Calfs leg compleat, and old oyl of Roses ii. ounces, Earth-worms cleansed with Wine and Salt ii. ounces, let them boyl in Balneo to the consistence of a Mucilage; with this anoint the neck, shoulders, and the places where the pain is, for it gives great help. *Pliny*. *Marcellus* anoints them with Honey, and then he lays on the Mucilage prepared. When any part is wasted and receives no nutriment, cleansed Worms must be put into a glass very well luted, that nothing may breathe forth, and so set in a warm oven or in Balneo, and they will then resolve into a clammy moisture; an admirable remedy and approved for the Palsie of the limbs: Take the ashes of tender Earth-worms iii. pounds, Ginger, Galanga, of each ii. ounces, with clarified Honey incorporate them for an Unguent, with this for three nights together anoint the Patient, binding his arms forcibly over his belly or stomach, then cover him warm, and let him beware of cold. *Jacobus de parma* To drive away hoary hairs, women use these ashes mingled with oyl whilest they comb their head, as *Pliny* saith, to whom *Serenus* subscribes in these verses:

Earth-worms and oyl of Olives, free from cares;  
They will preserve a man from hoary hairs.

We said before how they cure the Tooth-ache. But further the powder of them rubb'd on will preserve the sound teeth, and being injected will make rotten teeth, though it be a grinder, to fall forth; especially, if the tooth be first scarified, and fill'd with powder well sprinkled on it. *Actius*, *Gal.* s. sic. loc. bids us do almost the same out of *Archigenes*. Also they are good with the root of Mulberries boyled in Vinegar of Squils, to wash the teeth. For purulent Ears, poured in with oyl they help much, as *Galen* thinks, and cure their inflammations, being boyled with oyl of Roses. *Actius*.

If that your hearing fail, an old disease,  
Is cur'd with Earth-worms boyled with Duck's grease. *Serenus*.

*Myrseus* bruisheth Worms with some small quantity of the earth from whence they were taken, and works them together, and anoints that upon ears that are bruised. *Marcellus* bruisheth them with oyl of Roses, *Celsus* with oyl of Olives. *Faventinus* for pains of the ears anointeth the outward parts with oyl of Earth-worms, and also pours it into the inward parts. *Marcellus* bids to bruise Leeks not planted but sowed, odd in number, and as many Worms together, and boyl these in the best Oyl to thirds, and he saith that this oyl put into the ears is very good for their greatest pains and deafness. *Abimzoor* cures clefts of the hands and feet with oyl of Earth-worms. For an old pain of the head, they are held very excellent, bruised with Vinegar, Frankincense, and Castoreum. *Galen* for the same prepares in his *Expositis* such a Remedy: Take xv. Earth-worms, as many grains of Pepper, Vinegar what is sufficient, mingle them, smear them on. Another: Take Earth-worms, Moufe-dung, white Pepper, Myrrhe, each half an ounce, bruise and mingle them with Vinegar, and anoint that part of the head that the pain lies on. *Myrseus* will have the Worms to be odd, and to be taken only with the left hand, and so superstitiously anointed. If thou wouldst try, saith *Marcellus*, whether a swelling in thy neck be the Kings-evil, lay a live Worm upon each swelling: if it be a scrophulous tumour, each Worm will turn to earth; if not, he will be alive and receive no hurt: so saith *Pliny* also. Earth-worms are a part of that noble Plaister of *Arnoldus* (a *Breviarius*) of a Rams skin, or the blood of a man that is red, against the Rupture: and *Hollerius* commends it to cure *Enterocoele* and *Epiplocele*. They also diminish the Stone, both taken inwardly, as also anointed on the thare somewhat thick. *Galen*. What concerns womens diseases, bound to the neck they retain the birth, but contrarily applied to the hips, they draw the birth out and the secundine, for they draw mightily wheresoever they are applied living. *Plin.* Inflammations of the breasts, Earth-worms alone laid on will cure, for they concoct, open, draw forth, and heal. *Alex.* *Benedicti*. So *Myrseus* makes a plaister of them bruised. Lay on Earth-worms with Quinces, or with dried Barley flour, upon Breasts hardened or inflamed. *Actius*. But if after delivery womens breasts swell, and to use the words of *Serenus*:

If the swollen breasts do feel great pain,  
Smear them with Earth-worms 'twill help them again.

For they will concoct the Impostumes and suppurations of the breasts, and after concoction will heal them and void out the matter. For the Shingles, the Indians, saith *Carolus Clusius*, make an unguent thus: Take Earth-worms, and feed them some time with leaves, fine flour, or flour and milk, and when they are grown fat, boyl them in an earthen vessel (always scumming them) when they are strained, boyl them again to the consistence almost of a plaister, which well prepared will be almost of a yellow colour: dissolve some part of this in distilled water of Roses, and wash the part affected with it twice a day. A most excellent remedy, saith *Clusius*, and proved by very long experience. *Pliny* saith they will do the same in Vinegar, who together with *Actius* and *Myrseus*, affirms that Worms bruised and laid on the place a Scorpion hath stung, are an admirable remedy, for they presently ease the pain, and correct the malignity of the tumour.

Oyl of Earth-worms is known by all to be good 'gainst divers infirmities, and the Ancients made it thus. Take Earth-worms half a pound, Oyl of Roses, Omphacine, two pound, the best white wine two ounces, let them boyl in *balneo titi* the wine be consumed. This cures the nerves relaxed, contracted, astonished, cut in sunder, or cooled, it easeth almost all pains, and wailes the stone, being anoynted on the share and loins. But in the preparing of it, every man follows his own opinion. For some before they adde Oyl, wash and purge them with white wine, some neither wash them nor presse out the earth, and perfwade to take the best wine, that it may penetrate the sooner: Others use simple Oyl, not Oyl of Roses, others again Oyl of Chamomile. Also they shew us many ways to boyl them, for one useth a furnace, another Balneum, another doth it in dung, and some mingle of Chamomil flowers, and of Dill, to assuage pains, some of Hypericon flowers to glew wounds together, others Snails without shells, others with shells, every one as he thinks fit. The Author of *Bartolus* prepares an admirable water of Worms, fol. 254. that is very good for wounds and discaies both outward and inward. For Worms of Horses and Oxen, *Pelagius*, puts live Earth-worms into their nostrils, yet it were far better with a horn to put them down their throats into their stomacks. *Tardius* bids give asses of Earth-worms bruised with flesh to a Hawk, when she cannot mite. They are also meat for Moles, and when they dig, they will break out of the earth in wonderfull haste. Sows (as *Varr* writes) will trouble the mud, and dig up the earth with their snouts to feed on them. *Albertus* saith that Toads, *Belonius* Lizards, *Tarentinus* that Sea Grampets, and experience saith, that Frogs, Eels, Gudgeons, Carps, Roches, Trouts, Darcæ, and Tenches will greedily devour Earth-worms: Also that bird *Aristotle* calls *Aiz*, some call it *Pangulus*, and Heens, and all Qualls will feed on Worms. But those are no wise Fisher-men, that cause Worms to come forth with medicinal juices, for when they are bitter the Fish will not bite, but if they lie a day in Wheat-meal and a little Honey, and then put upon the hooks, they relish better then *Ambrosia*: And it is no ordinary good we may receive by them, that they foretewh rain when they suddenly come forth of the earth, but if they lie hid the night before, it is a sign of fair weather. Some do harden Iron like Steel thus. Take Earth-worms two parts, Radish-roots one part, bruse them, and distill the water in a Limbeck. Or take distilled water of Earth-worms three pound, juice of Radishes one pound, mingle them, let Iron hot be often quenched in this water, and lie in it ten dayes, and it will grow very hard. *Another*. Take Earth-worms two pound, juice of Radish one pound, distill them at an easie fire, and temper your Iron with this distilled water. Also draw forth juice of Sorrel, thinking Hemlock, and of round *Aristolochia*, of each alike, and temper your steel often. The juice of Sow-bread is thought to do the same. Mr. *Fagenham* a famous Physitian writes thus. *Another*. Take Goats blood, adde to it a little salt, let glazed pots be buried in the earth, well luted for thirty dayes, then distill the blood in Balneo, and put as much of the distilled water to the same quantity of the water of Worms. *Another*. Take water of Worms, Rapes, roots of Apple-trees, each alike, distill them apart, and mingle equal quantities together, and quench your Iron in that water, as we said before. A Frenchman namesle.

## СНАР. XXX.

*Of Worms in living Creatures.*

The Name. *Isidorus* thinks they are called *Lumbrici* from *Lumbi* the loins. For the Ancients call the belly *Lumbos* and *zaphobus*, by *Hesiodus*, and *Suidas*. Some interpret that, those that are sick of Worms. But more rightly from Earth-worms, which they represent in form and nature, do they borrow that name. *Cornelius Celsus* calls them Worms, *Pliny* the living Creatures of the entrails. The Greek call them *δαρυντες*, *μυρδιντες*, *δαμιντες*, *δαρυρας*, *διναι*, and when they are extraordinary great, *Onelia*, as appears out of *Ælian*, l. 9. c. 33. You must observe, that *Latin* writers make difference between *Vermes* and *Vermina* or *Verminationem*, that is Worms, and diseases from Worms in the belly; for *Vermina* and *Verminatione*, are the pains of the belly from Worms, as *Celsus*, *Serenus*, *Pliny*, and *Seneca* *Epist.* 97. testify. The Arabians call them *Emicar*, Syriacus *Elu-lingen*, the Germans *Spulwurm*, *Buchwurm*, the English *Gutworm*, the Slavonians *Sirkkawke*, a word hard to be pronounced. A belly-worm is a living Insect, without feet, bred in the bodies of living Creatures, hurting their operations diversly. I said a living Creature, that I might exclude those broad Worms called *Tænie*, which though they be of substance that grows to the guts, and are in form like to living Creatures, yet they cannot properly be accounted living Creatures, as *Hippocrates* l. de morbis, rightly affirms. I said an *Insect*, both because they are of a round body, and because the Ancients do not reckon them amongst Serpents, nor have hitherto ranged them into any proper Classis. I said *without feet*, that I might distinguish them from Worms with feet. I said *bred in the bodies of living Creature*, because they are not only bred in the guts of living Creatures, but in all the fleshy parts, and in the heart it self, as it shall appear by the history. And not only men are troubled with them; but also Horses, Calves, Dogs, Hogs, Hawks, and all perfect Creatures. I said *that diversly hurts actions*, because from them, pains, Consumptions, Convulsions, Epilepsies, Frenies, and divers other mischiefs follow, especially if they be very great, or very many. And

And all these Worms breed either in parts that are alive or dead. The worms in living Creatures seem to be of three sorts, the round Worms, *Guird-like Worms*, and *Ascarides*, such as are bred often in the Intestines of living Creatures : And not there only, but in other vessels and bowels ; of which matter I finde there was a great controversie amongst the old Authors. For *Galen* *l. 1. de loc. aff. c. 5.* affirms certain diseases to certain parts, as worms to the guts, the Stone to the reins and bladder. But I my self with many other persons of the University, saw a stone as great and like a Pigeons Egge, voided by stool, at *Cambridge*, by Dr. *Larkin* the Kings professor in physick, who was long tormented with a pain of the Colick, and waiting, and he voided that stone in the same form and magnitude, as a most troublesome birth at his fundament. *Montani* and *Brenuinius* write that they saw the like. Also by giving but one Clyster to the choise wife of noble *Leonardus*, I brought forth 33 stones like to Medlar seeds, at one time in the year 1583. Many there are that question the credit of *Pedemontanus Arculanus*, *Gutierrez*, *Trallianus*, *Brenuinius*, and *Montani*, because (besides the opinion of *Galen*) they have written that they have more then once seen stones in the head, lungs, greater veins, the gall, bladder, under the tongue, in the joynts, and belly. But since daily experience doth clear them from a lie, we may say that the *Greek* speak, as *Greeks* were wont to doe, but that these men speak but the truth. *Galen* might have remembered, that *Hippocrates*, *Epid. 5. sec. 12.* did not rashly affirm, that there was a sharp stone pressed out of a womans matrix, by the hand of the Midwife, as great as the whirle of a Spindle. This I thought fit to premise, lest when I shall report them, the faith of others and my own experience think that worms are bred almost in every part, others should think I relate either a thing very strange, or what is false. Worms seldom appear in the most vehement pain of the *Hemicrania*, yet *Hellianus* teacheth that it comes to passe sometimes, *l. 1. c. 1.* The *Polimiani* call this disease *Stompy Roback*, the Germans *Hauptwurm*, and it was formerly frequent in *Germany* and *Hungary*, and all that were taken with it fell into the frenzie, or madnesse, and when they were dead, and their brains were opened, a Worm was found there. Then the Physicians gave Garlick with distilled wine once or twice a day, and all that drank of that recovered, the rest dyed. *Philip Shot* cured five of his servants that were sick of that disease, with the same remedy, as one writ in a Letter to *Gesner*. That Worms are often seen in the brain, *Thomas a Vega* saith, com in cap. 3. *l. de loc. aff. Galeni*, and *Balthazar Conradinus* *c. 10. de feb. Hungar.* *Alex Cornelius Gemma*, in *Appendic. opus Colmaritic.* disputing of a peitilential Semitertian, speaks of a woman in a city near the river *Moisa*, that had a long and vehement pain in her head, when she was dead of it her brain was opened, and there was found a great quantity of filth, and abundance of Worms. That disease is known faith *Rhafsi*, by the internall corrodng of the forehead of the head, and by the most vehement pain, that almost makes them mad. It is cured by needlings, and juices cast up into the nostrils, that will kill Worms. *Rhafsi*, *l. 1. c. 9.* But the Worms that are yearly found in the brains of Stags, and sometimes of Goats, Sheep, Rams, (chiefly those that are fat) that Hunters and Butchers know better, than that I need to tell them. They are as big as the greatest Worms, and of the same form with them, as *Alexander Brediclus* and *Matthiolus* report. *Theophrastus* mentions these *Hist.* lib. c. 53. and *Alexander Trallianus*, *l. 1. c. 15.* It is reported that *Democritus* of *Athens*, when he was young was troubled with the Falling sicknesse, and he went to ask counsell of the Oracle of *Apollo*. and *Apollo* answered him thus :

Take a tame Goat that haib the greatest head,  
Or else a wilde Goat in the field that's bred,  
And in his forehead a great Worm you'l finde,  
This cures all diseases of that kinde.

The young man was much troubled at this answer, and he repaired to *Theognisus Democratæ*, that was then ninety years old, to tell him the meaning of the Oracle. This *Theognisus* told him that nothing could be plainer, for he had learned by long experience, that there were Worms in the heads of Sheep and of Goats, that being wrapt in a black Sheeps skin, and hanged about ones neck, would miraculously cure the Falling sickneſſe. Some write, as *Pliny* witneſſeth, that two Worms are found in the head of a downy *Pbalangium*, which Worms bound up in a Deers skin, and bound to a woman before the Sun-rising, would hinder conception. Concerning Worms of the *Abdomen*. A woman, ſaith *Pennius*, that I knew very well, told me that ſhe had ſeen more than once ſome round Worms, that crept forth of the belly by the Navel.

more than once, some round Worms, that creep forth of the body of children.

The Ancients also say, that oft-times Worms will breed in the ears, against which they prescribe these remedies. Take the juice of wild Cucumbers, and the juice of Garden-sage; or that with broad leaves, mingle them both alike, and pour that into the ears. *Gal. 3. sec. loc.* where reckoning up the Compositions of *Andromachon* for the ears, he highly commends both of *Pittanis* and *Harpalis*. Take Opium two oboli, Myrrhe, Spikenard, Saffron, of each three oboli, burnt brasse five oboli, and of round and *Sicil* Alum, each one dram, black Hellebore two drams, mingle them with fad wine or Oyl of Roses, and apply them to the ears. *Lib. Esopist. 2.* he writes, that a Locust will destroy Worms in the ears, and he bids apply a sweet Apple to the ear, with a hole in it almost quite through, for the Worm will come forth, enticed by the sweet smell of it. *Pliny* much commends the root of *Cypresse* boyled in water, and the urine of a young boy, and the juice of Hemp, Rue, Bramble, and of Capers poured in. Lastly, many remedies may be fetched from

*Colomella.*

Bbbbb 2

**Columella**

*Colmella, Vegetius, Marcellus Empiricus, Trallianus, Vigo, Tardanus*, and all the *Arabians*, and therefore here I supersede, passing on to other matters. *Monardus* prescribed to one that had a Polypus in his nose, the juice of Tobacco to be injected; whereby the Ulcer was purged, and many little Worms came forth: Wherefore they breed also in the nostrils, (for all the Arguments that *Gabucinus* hath alledged against it) and are not only cast forth of other parts. Cow-herds know that Worms will breed under the tongue, and the Worm under a Dogs tongue (the carrying of which Worm about one, saith *Pliny*, will drive off the biting of a mad Dog) doth prove that sufficiently: And *Valesius* saith he hath seen Worms under mens tongues. It is known sufficiently by experience, that the very Breast and Lungs are not free from Worms; *Antonius Becvennius, Benediclus Renius, Mundella, Antonius Sicular*, are my witnesses, who have seen them cast up, not by vomit or reaching, but even by coughing. Also *Alvarianus, Capite de Tuss*, writes, that sometimes a cough is caused from living Creatures bred in the hollow of the lungs, and cavity of the breast, which being no greater than little Lute-firings, yet when they creep from place to place they make one cough, and when they lie still it ceaseth. Also *Abenezar Aboomeran, lib. 1. tract. 1. c. 3.* makes mention of them, affirming that the old Physicians saw and writ of them. *Alevisus* and *Genilis* saw some in the liver and spleen, and *Platerus* in the gall bladder. Wherefore, whatever *Galen* or *Avicenna* may say to overthrow this from the perpetual motion of the Lungs, the nearness of the heart, and other frivolous Arguments, yet there is no man but will say, but that reason must give place to sense, especially in natural things. There was saith *Hieronymus Gabucinus*, a certain Noble woman of *Fanes* (in his Comment of Worms, to which we are indebted for the great part of this history) when she had a long time been tormented with pain of her stomach, at last she cast up a ball of hard flegme, this being dissected, it seemed like a piece of flesh, and in that there was a Worm, and thus the woman recovered, whom the neighbours thought to be bewitched. Of Worms of the Reins and Bladders. When the reins putrefie, or the muscle of the bladder, oft-times little Worms are cast out, concerning which I thought good to write these histories out of *Pemius*. A woman thirty six years old, had great pain of an Apoplexie in her reins, and she consumed, at length she cast forth little Worms, a fingers breadth long, which I first saw in the bottom of her urine, Anno 1582. *Randolph* a London Physician, very learned and pious, when he looked on at the dissection of the body of one that was dead of the Stone in the kidneys, he found in one of the kidneys that was corrupted, it was wrinkled and putrefied, a Worm of a full length. *Timothy Bright*, a very skillful Physician, and to whom we are much indebted for the Epitomie of the Ecclesiastical History, saw a Scholar at Cambridge when he lived there, that pissed out a Worm an inch and half long; but it was not without feet as Worms are, but it had many feet and was very nimble. *Aloysius Mundella Medicina Dialog. 4. Argentarius cap. de vesic. morb. Rondeletius lib. de dign. morb. c. 17. Scholaster Holkirk lib. de morb. int. cap. de vesic. affect.* (to say nothing of *Levinus Cardan*, and my own experience) do sufficiently testify that such Creatures breed also in the bladder: That Worms come forth of the matrix, like to *Alicarides*, I did not only see at *Frankfurt* in a German woman, at eighty years of age, but *Aloysius* confirms the same in his Epistle to *Gesner*, and *Hippocrates 2. de m. mulier.* and *Abenezar, lib. 1. tract. 2.* have said the like. *Kirandis* writes, that there is a Worm to be found in the matrix of a Mule, which tied to a woman will make her barren. In *India* and the Countreys above *Pyrry* there are some living Creatures like to Worms in form; (they are commonly called Dragons) they are in the Arms, Legs, Shanks, and other brawny parts, also in young children, they breed in secret places under their skin, and more apparently: When they have itayed there for some long time, at some end of this Dragon the place comes to suppuration, and the skin being opened out comes this Dragons head. *Paulus lib. 4. c. 59. Soranus* granteth this, but he questions whether they be living creatures. Moreover, in the blood it self some living creatures breed, like to Worms, that feed on the body, as *Pliny* writes, *Hist. 26. c. 13. Plutarch 8. Sympof:* who writes, that a young man of *Athens* voided Worms with his seed. *Agnetia* saw them come forth at the groins and buttocks, as he saith *lib. 4.* to whom *Benevinnus* subscribes c. 100. Also they breed under Sheeps claws, (saith *Colmella*) and such I have seen under the nails of those that were troubled with a Whit-Raw. And thus farre concerning Worms in the bodies of living Creatures. But such as breed in dead and corrupt bodies, (whether it be from the disease or the Chirurgions fault) want a Latin name, but the *Greeks* call them *Εντα*, as appears by *Hippocrates*. The English call them *Majgots*. *Celsus* would also have them called *Enlat* in Latin, borrowing the word from the *Greeks*. We will speak of these in order. And first concerning Worms of the guts, the descriptions whereof, the causes, signs, symptoms and cure will bring much light to the History of the rest.

## CHAP. XXXI.

## Of the Description of Worms in the Intestines.

WE shewed before that there are three sorts of Worms that are bred in the guts. It will be worth our labour to describe what each of them is. The round Worms are the first difference, and that manifest to all men, because these are the most common, and are so called, because they are indeed round and smooth, not unlike to those worms that breed in dunghills and gardens, which we said before are called by the

the *Greeks*, the bowels of the earth. These as all other Worms are blinde, without any eyes, and they are a hand length or something more: yet *Benevinnus c. 2.* affirms that a Smith did vomit up a Worm with grosse flegm, almost a foot and half long, very plain, with a red head that was smooth, and about the bigness of a pea; but the body of it was downy, and the tail crooked like the half-moon. Also at *Rome, anno 1543.* one that was now upon his youthful years, when as for many daies (as *Gabucinus* tells the story) he had been in great torments of his belly, at last he voided by stool a great black Worm with black hair, five feet long, as big as a cane. He saw one also that did not exceed the hands length, like to the round Worms, but that the back of it was hairy, and set as it were with red hairs; but this being cast forth by using good remedies, he grew very well. One *Antonianus* a Canon (as *Hieronymus Mantius* tells the story) voided a green Worm, but he died shortly after he had voided that. But for the most part they are smooth and not hairy, a hand long and not a foot, at both ends pointed, as it were with a nib. And they differ so far from Earth-worms, that they wear no collar nor girdle: what concerns their colours, I have seen some red, yellow, black, and partly white, or gold colour. Green ones are seldom seen, yet *Mantius* saw some. Gourd-worms are those quick Worms that are like unto Gourd-seeds; concerning which the question is so great between *Gabucinus* and *Mercurialis*; for when he treats of a broad Worm, that is made of an infinite number of Gourd-seeds shut up in a skin; he saith thus: I saith he, think a broad Worm to be nothing else but, according to *Hippocrates*, as it were a white, shaying of the guts, that comprehends all the intestines, between which some living creatures are bred like unto Gourd-seeds: which may then be seen to be voided when all that shaying is voided, yet oft-times it is voided by parts: which if they break when they are voiding, then you may behold these Worms like to Cucumer-seeds voided by themselves, sometimes many of them being folded together, sometimes but a few. But if any man shall see all that portion, let him know, that that scraping off like a Worm doth not live, but the creatures that are in it, like Cucumer-seeds. I once saw this Worm called a Broad Worm that pants, to have been of a wonderful length, and it crawled; a woman in a Quotidian Fever voided it by siege, and when I did with admiration much view it, and sought to finde the cause of its motion: that other man, who said he voided a portion of a broad Worm some daies before, which he would shew unto me for a wonder, did shew it me with incredible desire. I had to see it; for this portion did move it self, whence I was more desirous to know the cause of that. At last searching diligently, I observed through the whole hollow part of it, a rank of living creatures like to Cucumer-seeds, which crept forth of it as out of some bed; sometimes one, sometimes two folded together, oft-times four, or more, and that part of the shaying of the guts that was empty of these creatures did not move at all, but sank down: whence it comes to pass that I think a broad Worm is nothing else but snotty matter bred between the guts, or snively flegm thickened by the coldness of the guts, covering the inside of the guts like a coat, which women that assist the sick call a bed of Worms. Out of which snotty matter little living creatures like Gourd-seeds proceed, as by way of a conception, which is covered all over by the second membrane in the womb which is first made of the feed. So saith *Gabucinus*. *Avicenna* agrees in this opinion, *Pen. 16. tract. 5. cap. 2.* the Gourd and broad Worms are bred from the clammy matter that is fastned in the superficies of the guts, which is comprehended by a flegmatic pannicle covering it as if they were bred from that, and did putrefie within it. *Antonius Benevinnus* a Florentine saith the same, and more clearly, in *com. de mirand. morb. causis, c. 87.* who writes that in the mineral Baths at *Avignon*, that are in the Countrey of the *Senner*, he saw a woman that for seven daies together drinking the water, did void these Gourd-worms in abundance, that stuck so fast together, one being close to the other, that they were in a rank that was above four cubits long, yet you would judge them to be but one body and one Worm. *Johannes* a Bookbinder at *Basil* (whilest I studied Physick there in that Academy, under *Zuingerus* and *Platerus* my Masters, anno 1579) voided such a Worm ten ells in length without any pain, and not many years before he had voided the like. It consisted of many Gourd Worms; without which it had had no motion nor feeling, and might deservedly have been rejected from the number of living creatures. *Platerus* had such a Worm dried that was eighteen ells long, I saw it. *Pliny* writes of a Worm a sick person voided, was three hundred foot long: wherefore whatsoever *Mercurialis* objects to the contrary, *lib. 3. de morb. pur. cap. 7.* since experience proves the thing, is without any firm ground. He saith it cannot be that any living creature can produce so many young ones, as there appear like unto Gourd-seeds; then, that the guts are not large enough to receive so many young ones. Thirdly, that this comes to pass by reason of the violent putting them forth that gives the form, because the young one being broken by coming forth, is divided into those many pieces like Gourd-seeds. And hence we may conclude that those are trifles that the *Arabians* speak of Gourd-worms, forasmuch as there are none such: What is that I hear, most learned *Jerome*? that thou, being gray headed, and taught by long experience, shouldst so applaud thy own imagination, that thou shouldst dare to deny a thing obvious to sense, and plain to our eyes, and to *Gabucinus* *Benevinnus*, and the *Arabians*? Go to, No living creature can produce so many young ones like Gourd-seeds: why not I pray? when as one maid that took physick to kill Worms, as *Gabucinus* affirms, voided 177 round Worms? To say nothing of that *Benevinnus* reporteth c. 85. of the incredible multitude of them: and he was a man to be believed. And what thou speakest of the capaciousness of the place, if that be an argument, it is an error to be laughed at.

For the guts will contain not only as many as are in a Gourd, but the Gourd it self prepared. By thy last objection thou dost but mock, but canst not weaken the opinion of *Avicenna* and the *Arabians*: for as much as in bodies dissected, Gourd-worms have been seen wrapt up in a roll, wherefore they took not their Gourd-form from the violent voiding them at the fundament, or from the manner of putting them forth, as thou either inventest maliciously, or ignorantly believest. I conclude therefore with *Gabucinus*, that there are Gourd-worms, and the broad worm called *Tenia*, is not properly a Worm; nor yet a living creature, but something about the entrails like white thavings, as *Hippocrates* saith, that is filled with these Gourd-worms put in fashion of a coat of Mail. *Ascarides* have their name from *ἄσκη*, because they bite and tickle very much, and so exercise the patients that are troubled with them: others derive them from *ἀσκή*, which signifies to move. The Ancients called them Beasts-worms, because they were seldom found in men, but often in Horses, Dogs, Hens, and Oxen. And they were so seldom seen in men, that *Hippocrates*, and *Celsus* that followed him, either knew them not, or thought them not worth the mentioning, and so they said nothing of them; and yet they writ at large of other Worms. They are like the round Worms, but ten times shorter, (for they are seldom above an inch long) and what length soever they be, they are thicker at the end of the longanum, and the spindler of the *anus* they are found, causing a vehement itching in those parts. *Galen* writes in *Lib. de Ling. Hippocratica*, that *Gout* an old man called *Ascarides* long Worms; which difficulty *Mercurialis* easily opens, for we should read it, saith he, not *μυρσά* great, but *μυρσά* small. Moreover, though in consideration of their breadth and thickness they seem long; yet compared with round Worms, they may be called short. These and round Worms are of divers colours, as the matter they are bred of is, or in respect of the heat that concocts them; but Gourd-worms are alwaies the same: whence I should conclude that Gourd-worms breed only from flegm, but the rest from all humours and excrements. *Ascarides* oft-times come forth in great numbers, and before they be, voided they prick much.

## CHAP. XXXII.

## Of the Original of Worms in the guts.

*Aristotle* lib. 5. *Generat.* and *Hippocrates* before him, 4. *morb.* make the material cause of Worms to be dung. *Oribasius* l. 3. *Apb.* 30. and *Momanius* that followed him being his Master, thought that living creatures might breed in the guts from all kinds of humours: and *Mercurialis* who thought they were deceived, was blinde himself at noon-day. But let us examine his Arguments: It is found, saith he, that they will not breed from blood, because blood never purities so much, that living creatures may breed from it; Also he affirms from the judgement of *Alexander Trallianus*, that living creatures cannot breed in the veins. But experience cuts off the nerves of his first argument; and the Authority of *Rhazes*, *Lopinus* and *Pliny*, overthrow the second. Also they cannot breed of a melancholy humour, because it is cold and dry; nor of yellow choler, because it is bitter, and such creatures are not fed by bitter things, but destroyed. For which opinion, though he urge *Aristotle*, *Hippocrates*, *Galen*, 4. *simpl. med.* *Egineta*, lib. 4. c. 27. yet what is there more slender than the opinion of them? For Butchers know that in the milks of Sheep, which is the fountain of melancholy humour, and in the gall of Oxen, which is the receptacle of bitter choler, innumerable worms are oft-times found. And I see no reason why Worms may not breed from yellow choler, as well as in Wormwood; from melancholy as well as in stones, from blood as well as in sugar. But if they be not bred from them, whence have they matter that they breed of? The Physician of *Padua* will answer, *It remains therefore that they can breed only of raw flegm*, which either ariseth from too great quantity of the best meats for want of heat, or quantity of bad meats corrupt by depravation: which opinion, though it well agree with *Galen*, *Egineta*, *Actius*, *Avenzoar*, *Avicenna*, *Columella*, *Celsus*, *Alexander*, and chiefly with our *Mercurialis*, yet in my judgement *Hippocrates* is in the right, who thought that living creatures are bred in the little world, as well as they are in the great. Therefore as in the earth there are all kinds of humours, heat and spirit, that it may nourish living creatures that breed, so hath man all kinds of moisture that nourisheth things that breed. Moreover, when as these living creatures do represent perfectly Earth-worms, no man in his wits will deny but that they have both the same original. What flegm is there in the earth? yet it breeds round Worms, and Gourd-fishioned, and *Ascarides*, and all sorts of Worms, and the best and warmest earth abounds with them, so far is it that they should breed only of raw and corrupt humours. Do we not also daily see that Worms are voided by men that are in health? For I knew a woman of *Flanders*, that at *Frankfort on the Main*, which from her youth till she was forty years old, did daily void some round Worms, without any impairing of her health, and she was never sick of them. I conclude therefore that from every raw humour of the body Worms may breed; and not only from crude or corrupted flegm. The formal cause depends from internal heat, which is weak, gentle, pleasing, and fit to breed living creatures; wherein that plastic force of Caledonic Nature, (to use the word of *Avicenna*) doth make the colours by the degrees

grees of secret heat, and sporting her self doth make that broad form of Gourd-worms, and sometimes of Lizards, Toads, Grass-worms, Caterpillers, Snakes, Bees, as we read in Histories. This doth give them taste, feeling and motion, this gives them that force of attracting, whereby they forcibly draw forth with greediness the juices that slip into the guts. If it were not so, that heat that consumes all things, might perhaps dispose the matter that is changed by putrefaction, but it would never give the form and figure of a living creature. For it is not because the guts are round, that round Worms are bred in them, as some men dream; but the external form depends from the internal, and the spirit drawn forth of the bosome of the soul it self, doth frame the shapes without a Carver or Smith. This spirit is the mediate efficient cause; but God himself is the principal cause in this and other things, in whom, as well as we, the Worms are, move and have their being.

The final cause shewes their use, which declares Gods omnipotency, Natures majesty, and the singular providence of both for mans good. For there are collected in us some putrefied excremental superfluous parts, which the more bountiful hand of Nature changeth into Worms, and so cleanse our bodies; as we account it a good sign of health to be full of lice, after a long disease: also they consume much superfluous moisture in mans body, and unless they grow too many (for then they feed on our nutrimental juice) they are a great help to the guts; so far is it that they should be accounted by physicians amongst diseases, or the beginnings of diseases. Amongst the concomitant causes I reckon the place and the country. For though they are more common to children than to those that are of years, to women than men, in a pellential than a healthful time, in Autumn than in the Spring, to such as use an ill diet rather than to those that keep an exact diet: yet they accompany all ages, sexes, conditions, seasons, diets; for no man is privileged from them, yet some places or climates are free, for according to the nature of them, in some many, in others no Worms will breed: for all kinds of Worms will not breed in each part of the guts, but round Worms only in the small guts, *Ascarides* in the Longanum, the Gourd-worms only are bred in all. Also, as *Theophrastus* and *Pliny* testifie, there are no small differences amongst Nations and Countreys. (*lib. hist. pl. 9. c. 2. Lib. Nat. hist. 27. cap. 13.*) For broad or Gourd-worms are common amongst the *Egyptians*, *Arabians*, *Syrians*, and *Cilicians*: again they of *Thracia* and *Phrygia* know them not. And though the *Bacotians* and *Albanians* are under the same Confines, they are frequently full of Worms, and these are by a privilege as it were freed from them. He only will admire at this, or think it a Fable, who knows not that the nature of Countreys vary according to the position of the stars, the nature of the winds, and the condition of the earth. There is a River (saith *Aristotle*, lib. de nat. anim. c. 28.) in *Cephalema* that parts an Island, and on one side of it, there is great abundance of Grasshoppers, but none on the other. In *Prodelesma*, there is a way goeth between, and on one side of it a Cat will breed, but not on the other side. In the Lake *Orchomenium* of *Bœtia*, there are abundance of Moles; but in *Lebadium*, that is hard by, there are none, and brought from other parts they will not dig the earth. In the Island *Ithaca*, Hares cannot live; nor in *Sicily*, flying Ants; nor in the Country of *Cyrene*, vocal Frogs; nor in *Ireland*, as we know, any kind of venomous creature. The reason of all this he can only tell, who hath hanged the earth in the air without a foundation; for it is not my eye that can see so far, nor have I any minde to affect to know things above my understanding.

I leave that work to those that dare aspire  
To know Gods secrets, let me them admire.

## CHAP. XXXIII.

## Of the signs and cure of Worms out of Gabucinus.

Let us therefore shew the signs of Worms, beginning from those that are called round Worms; both because these do more frequently vex children, and because they produce more cruel symptoms: of which *Paulus* writes thus: they that are troubled with round Worms, are cruelly torn in their bellies and guts; and they have a tickling cough that is troublesome, and somewhat tedious; some have a hiccup, others when they sleep leap up, and rise without cause; sometimes they cry out when they rise, and then they fall asleep again; their Arteries beat unequally, and they are sick of disorderly Feavers, which with coldness of the outward parts come thrice or four times in a day or a night without any reason for them. Children will eat in their sleep, and put forth their tongues, gnash their teeth, wink with their eyes, they will be very silent, and are angry with those that rowse them up, the balks of their cheeks, in a short time, are sometimes red, sometimes wan-coloured. If the Worms run up to the Stomach, they cause nauseating, gnawing, and want of appetite; and if the sick are forced to eat, they scarce can swallow it, and if they swallow it down, they vomit it up again, they void many corruptions of meat by their bellies, and they are swollen like a drum, the rest of the body grows unreasonable lean, not by reason of hunger, nor immoderate evacuations. These things happen when these creatures creep and gnaw in the belly. A feverish heat sends up ill vapours to the brain,

brain, that arise from putrid moisture collected in the stomach. So writes *Paulus*: But *Actius* out of *Herodotus* writes thus: Those that are troubled with Worms have a most cruel pain of their stomach and bellies, and they have a little frequent tickling cough, and yet they spit up nothing: in their sleep they shiver, and rise preternaturally; some again put out their tongues and shut their eyes, and are silent, and cannot endure to be rowled, and cannot watch for weakness: some have their eyes bloudshed, their pulses unequal, obscure, deficient, and recurrent: some want an appetite, children whilst they sleep, bite their tongues, and move their mouths as if they sucked, or eat meat. But these things are done for a short time, and by circuits. Moreover some children besides reason, rise with crying, and presently fall down again: some crash their teeth, which it seems happens when the Worms suck, and gnaw their bellies and guts. And now it appears that some are come up into the stomach, and cause loathing, and bitings: oft-times also by themselves they are cast upward, but sometimes with some slegmatick humour. Some Infants neglected lose their motion, and are benumbed, and like those that are in a swoon, they sweat a cold thin humour, and most commonly they are wan-coloured: sometimes the face will be red, especially about the cheeks, but this colour again is changed into more than ordinary paleness. Others again like dotards speak strange words in their sleep; others change their places they ly on, still sleeping, and they are vexed, and turn from place to place: but very few of those do cry, for most of them are void of reason, and are silent. Also they that are vexed with round Worms, loath their meat, and if they eat anything, they cast it up again, or loath it so much they can hardly swallow it: for they fall into Feavers with vehement cold in the outward parts: some have their bellies swollen like a drum. So saith *Actius*. But these are the marks he reckons from *Hippocrates* opinion: Worms in the belly are discovered by these marks: If they be sleepy, and the disease will not let them, and their outward parts be cold, and there be gnawing at their hearts, the urine troubled, and the tongue full of moisture; also they that have Worms in their stomach, are full of spittle; and if any little Worm comes forth they spit no more: therefore all those that have Worms in the mouth of their stomach, do commonly cast them up all by vomit, but those that have belly Worms, void them by siege. But they all nauseate, and vomit up what they take in. They are like to those that are pricked, that have contractions all over their bodies, and move suddenly and confusedly, and they have torments and pains of their guts. Vapours carried to the head cause Vertigoes. Moreover the manner of diet that the party used will shew the generation of Worms, and all the rest. These are the signs of round Worms; but all these signs must not be sought for in every one, as *Paulus* saith; but some and the principal of them. I might joyn here many things out of our new writers, unless what they say, and more also were not to be found in *Avicenna*, whence they borrowed it.

Signs of broad Worms.

*Paulus* gives us these notes of broad Worms: sometimes they abound in those that have Feavers, and sometimes in those that have none. In Chronical diseases they breed, gnawing the stomach, and causing a greedy appetite. They eat the meat so fast, that we need more, and if it be not present, they bite shrewdly; the body grows lean and weak, and unequal. But the most certain sign is, that some bodies like Gourd-seeds come forth with our excrements: so saith *Paulus*, and *Actius* doth not differ from him, but that he saith, that they gnaw the stomach continually, and cause an insatiable appetite; and that the meats eaten soon turn to excrements. They that are affected grow weak of body and sluggish, and are always hungry, for what is living in the guts, when it hath consumed the meat, feeds on the body; but this sign will not fail us, if some things like Gourd-seeds be voided by stool. The signs *Hippocrates* gives are these: He writes after this fashion: There is another kinde of this, that comes forth like the white shavings of the guts; which hath these marks: The party voids feed like Cucumber-seed, and when he is fasting he is vexed, and spits much, his liver being affected, sometimes not; and sometimes when this vehemently affects his liver, it stops his speech, and he spits much, and after that it stops: and sometimes there is great pains in the guts, sometimes the shoulders ache, and then it stops again. Sometimes these are the signs of the broad Worms. He that is affected with this Worm, is almost always in health, but when he grows weak, he can hardly endure it, or be recovered. For this broad Worm takes some part of those things that go down into the stomach, and if care be taken it may be cured, but if not, the Worm will not come forth it self, nor doth it kill a man, but grows old with him, &c. *Ascarides* are always about the bottom of the belly as we said, and there they cause a great itching almost continually, as *Paulus* and *Actius* have written; and sometimes, as it is reported, they will make one faint. For that is shewed by their name. For they moving always do continually exercise a man and tire him out. They that are troubled with these, feel always a heaviness about their *Præcordia* and backs. The signs of these are chiefly taken from the filthy smelling of the excrements. They that have Worms their eyes at first shine, their cheeks are wan, in the night they have cold sweats, their mouth is pale, they start in their sleep, in the day they are more feverish, their tongues are dry lips, their breath commonly stinks, their face is pale, they nauseate and vomit often, they loath meat, they crash their teeth, especially in the night, they put forth their tongues (and they seem to eat) they are angry with those that awake them, they speak strange words, sometimes they are in a lethargy, and pick straws, and their heads ache, they cry out in their sleep, as the disease increaseth, their hearts beat exceedingly, their voice is interrupted, their arteries beat weakly, sometimes in the height of their pain, they are extended, and their mouth comes as in the Epilepsie, their belly is swollen like a Tympany: some-

*Ascarides*.

Sometimes the pains abate, and again there follow torments, and Colique pains, with a henteric flux of the belly, sometimes they are colive, and the excrements are hard. These are the signs of Worms, now follow the Prognosticks. The Prognosticks are very necessary in all diseases to know *Prognosticks*, what will be the event, and to know the condition of the patient serves much for the cure, as *Hippocrates*, especially in his Prognosticks, hath abundantly shewed; who in the beginning of his book de *prudent. Medicis*, hath delivered it: Especially foretelling here before the patient, things present, past, and to come, and what the sick have neglected, he is thought to understand the condition of the patient; and hence it is that men will better dare to trust the Physician. But because it is difficult to foresee all this, unless we use some artificial conjecture (I call that an artificial conjecture, that comes very near the truth) and who can easily attain this, unless he have learned the things that belong to the art, and remember them, and hath with all diligence exercised himself in the practice of it? The things will be thus known. If a man suppose that there is any vital vertue, he must know the disposition of the patient in strength and weakness; and when he is perfect in these, he must study further to know all differences of diseases in the greatness and manner of them, and then to learn the foreknowledge of the future state. And when he hath learned all these, then he must exercise himself both in comprehending the magnitude of the disease by exact conjecture, and the force of the patient, and how long they may last. Now practise will help him much in this; and before he hath diligently learned all these, it will no whit profit him to see sick people: wherefore they that profess physick, proceeding in this method, shall never undergo any disgrace, neither in curing, nor foretelling of future events, which they report some famous Physicians have fallen into. Hence it may be collected why some Physicians are more fortunate than others, and what a fraud that is, to call a Physician more fortunate than another: how absurd that is, *Galen* and *Erasistratus* have shewed; saying, that a Physician must be exercised in all these things in his minde, and he must be diligent, and prudent by nature, that comparing all together, he may get a grosse summe of predictions, that shall be useful for himself and for his patient. For such is the force of prediction, that always for the most part, what the Physician foresees will come to passe, where the Physician is perfect, and the sick doth not neglect his orders. But because, as it is evident, a Physician by predictions may get immortality almost, so chiefly from those things that do belong to this affect, he shall win glory to himself, by telling the sick their condition, who for the most part are children, or ignorant what their disease is. Since therefore Prognosticks are chiefly necessary for this disease, I will not fail to set down what the Ancients have written of this disease. *Paulus* a great follower of *Galen*, writes of these things to this purpose. Worms bred at the beginning of Feavers, have their subsistence from the corruption in the body, about the state of the disease, from the malignity of the disease, about the declining, they grow better. For *Hippocrates* saith, it is good that round Worms come forth, when the disease comes to a Crisis. But *Actius* writes thus from the opinion of *Herodotus* a Physician. Worms bred in Feavers, and without, that differ one from the other in multitude, magnitude, colour, and time. For Worms bred at the beginning of a disease, have their being from the corruption that is in the body, about the vigour of it, from the malignity of the disease, about the declination, from the change to better, and they are soon also voided forth, Nature driving them to the outward parts as she doth the rest of the excrements. But the greater ones are worse than the lesser, many than few, red than white, living than dead. Our new writers adde to these; if round Worms are cast forth alive at the beginning of acute diseases, they shew pestilent diseases, but if dead ones be cast forth when the diseases decline, they are an ill sign also, however they appear both these times, it is bad. It may be because that Feaver that follows Worms is always naught, because it consumes the matter for Worms. It happens also that the Worms are set on fire and grow hot by reason of a Feaver, and so are wreathed together, and moved, that they so much the more affect and trouble those that have these Worms. They adde further, that it is proved by experience, that Worms are in the belly, if in the morning you sprinkle cold water on the mouth of childrens stomachs, for they will all gather to one place. Worms sprinkled with blood, so voided is ill, for they shew great hurt of the guts, to cast Worms up by vomit is naught, for it shews the stomach to be stuffed with filthy humours. Frequent cold breathing of children, their bodies yet swelling, is deadly, for it shews they will die the next day. If the eyes of the sick are somewhat held together, and cannot be clofed by the fingers of those that stand by, death is at hand. Some there are, it may be following the opinion of *Alfaravius*, that say that those who are troubled with *Ascarides*, are but short-lived. But there is a great question to be resolved, and that being done, I shall put an end to those things that concern the Prognosticks taken from Worms. *Actius* a little before said that live Worms were worse than dead ones. But *Rhasis* and *Avicenna* that follows him, think the contrary, absolutely preferring the dead ones before the living. In which question, to passe over other men, I shall say what I think, that the strongest affection is taken from those that are dead, because they must needs be driven forth, and cannot come forth of their own accord; yet I follow *Hippocrates*, who in a certain place useth some words that are difficult, wherein he would have us to consider diligently what symptoms VVorms breed, for if they come forth without any symptoms they foreshow a good sign. But he makes it clearer elsewhere thus. It is necessary that round Worms should come forth with the excrements, when the disease comes to the Crisis. So that by this we may understand, that if they be voided any other time, it is done rather symptomatically than by force of nature, and therefore they shew corruption or malignity, as *Paulus* and *Actius* distinguished.

But



The cure.

But because we can never rightly undertake the methodical way of curing Worms, unless the belly in which they are well disposed, nor can this be, unless the whole body be so, and this is excellent well performed by good diet; wherefore that in the first place must be well ordered, for without that all helps are in vain, for the preserving and repairing our health. For this is so famous, and almost the best part of Physick, that that admirable *Corn, Celsus, Galen, Pliny*, and almost all the old Physicians, could never give it commendations enough. *Asclepias* formerly esteemed it so much, that he almost took away the method of curing by Physick, and wholly turned all curing upon diet. Now this consists not only in the quantity and quality of meats and drinks, but also in all those things that befall us whether we will or no, as in sleeping and waking, motion and rest, as also in the repletion and emptiness of the whole body and of every part, and in the affects of the minde, but chiefly in the Air that is about us, which not only sticks fast to us outwardly, but continually enters into the inmost parts of our body by the drawing in of our breath. As for what concerns those things that we take, because they are such things that every man knows, I shall say nothing of them. For there is no man ignorant, that divers meats, and of ill and naughty juices, and disorderly taken, will breed crudities, and that glutony and drunkenness do our bodies great hurt, yet many kinds of meats, that are hurtfull in other diseases, are profitable in these. Wherefore we shall as it were besides our purpose, and by the way touch upon these, first adding what *Paulus* writes. Let the meats of those that have Worms be of good juice, that may easily be dispersed, and passe to the parts, and neither foster the cause, nor weaken our forces.

Wherefore we grant them wine mingled with water, and let them eat often both for their need, and that the Worms may not gnaw them. If there be a scowring of the belly, it is a sign that many are bred, the meat being not dispersed; and in that case Pears or Quinces must be mingled with our broths; Wheaten bread is a wonderful help, having Anniseed mingled with it, or Fennel or Salt; or bread that is between Bran and Wheat, called *avrykhar*, because there are joyed together in it, the Bran, the Hulls, and the Flour. Men call also this bread *avymeyr*, because all the Wheat, without taking any thing from it, is made into bread. Also the wheat it self that the meal is taken from must be the best, for some of these have much Bran, which is the courser wheat, but the finer wheat is the best. But wine that is mingled with water, because it gently bindes, is held to be very convenient. Mountain birds are fit for their meat, and young wood Pigeons, green Groundfowl, and Goats-beard, the broth of black Chiches, and Coleworts, and Capers, and pickled Olives eaten; and if there be no Fever, let them eat their other meats with Mustard, also fowr and oyle things are commended. Also Panick (which *Dioscorides* called the honey of Corn) is most durable, if so be it may be reckoned amongst Corn. Also Spelt in the decoction of Myxie, and a Pistane with a great quantity of Oyl of unripe Olives, besides these, Lupines, Cresses, Betes, Mints, Smallage, Radish, and fawce eaten are good. Give children before all meat, a decoction of Sebellens with Mints. Milk is very hurtful, as also Fish, and Pulse, and whatsoever is of a cold grosse substance, and hard to be digested. Bread unleavened breeds Worms, for it is good for no man, and so are all moylt meats, that easily turn to corruption within.

For all kinde of Worms it is most convenient to use abstinence from such things as breed them. And when they are bred, it is good to eat often, a little at a time; and that is best, when they leave off gnawing. But those that have *Ascarides* must eat meats of good juice, and of easie digestion, that the force of them may not reach so farre as the right gut. For the matter fit to breed them is so consumed. Thus far for meats and drinks to be taken. But the other five kinde that are not so manifest, shall be handled by us also with all brevity. And we shall begin from sleep. It must not be too little nor too much, and in the night rather than in the day, at least two hours after meat. Moreover, to be long idle is naught, let exercise precede meats, and rest after meats. Nor is every motion to be taken for exercise, but that which makes us breathe more; unless it be when we have taken Physick against Worms; for then we must ride or run, to shake our bodies; for they are more easily cast forth by hard exercise or labour: but children will hardly observe these rules. Care also must be had, that the belly may twice be unburdened, and if that will not do of it self, we must use a Suppository or Clyster to provoke it, made of such ingredients that are fit for this purpose. All affects of the minde whatever they be, must be set aside, as quarrelling, anger, sorrow, great cares, and thoughts, sadness, fears, envy, and all such kinde of perturbations, and chiefly after meat. For these change and turn the body from its natural state. Let men beware of cold North winds, and let them not go barefoot. The air because it always is about us, cannot be chosen at our pleasure: for it is sometimes a defence for us, and sometimes the cause that makes Worms, or fosters them: It will be a defence if it be very hot, and dry, pure, clear, and calm; and it will chiefly foster the disease, when it is very cosd, or moylt, or moved by the North or South winds, or by too great heat, dissolves our forces, and then by art it must be thus prepared: To burn in our Chambers wood of Juniper tree or of Citrons, or Peach-trees, and such wood as is against Worms. Also to perfume the place with tops of Worm-wood, Peach-tree leaves, Citron pills, roots of Pomegranate-trees, also with Fern, and Ivy. But that is the best that is made with Myrrhe, and Aloes. Another remedy that succours the fainting Spirits, by reason of Worms. Amber-greece two penny-weight, Musk one penny-weight, Gum Arabick, four penny-weight, Roses, Sanders, Cloves, Privet, Frankincense, of each one penny-weight, *Gallia Moschata* so called, six penny-weight, Lignum Aloes burnt to a cole twenty penny-weight, the quenched coles of Vine-branches, which is sufficient, make them up with Rose Vinegar.

Worms

A general cure of Worms.

Worms are oft-times exasperated with vehement remedies, that they bring children to Convulsions, swoondings, and death; wherefore they are not rashly to be given, and at all adventures. But because that remedies by reason of their different qualities are thought to be good to kill and bring forth Worms, therefore in general, such remedies as heat, drie, cut, and are sharp, bitter, salt, or fowr, and attenuating, are to be used. For either they kill the Worms by their sharpness, or bring them forth by their bitterness, or they allure them to come forth, or else they are known to be good to bring them forth by the looseness that follows. They are brought forth 'tis likely at once, by such supping means as make the passages slippery, or by some effectual quality, that is namelesse. There are some cool remedies that effectually drive forth Worms, and some by a hidden quality, as shavings of Harts-horn. But those things are best that kill the Worms, for so long as they are alive they are an occasion of mischief. And they are hardly driven forth when they are killed, wherefore they must be drawn forth by Clysters; otherwise they send a filthy virulent vapour to the brain, and likewise inflame the body, and hurt the appetite and concoction. But because Worms happen most to children, who are hard to be dealt withall, I thought it not fit to conceal that wonderful way that *Paulus* mentions, whereby Aloes, and certain broths are given to them by way of suppings. A certain Cooks Instrument or spoon that is called *Cuplaspans*, is put into their mouths as they lie upon their backs, and by a little Clyster with a strong Pipe, Aloes is forced down their throats, holding their mouths wide open as far as it is possible. *Polux* makes mention of this, but doth not tell us what it is. But whatsoever *Zemerysi* is, we understand two things by it, that it is made defending, that thereby the bitterness of the Aloes is not tasted. But by that other Instrument that *Paulus* calls *Clysteridion*, it is forced in by violence. But force and nature concurring, the motion is most swift, the heavy matter running downwards, and is violently driven in by it. *Paulus* also describes another Instrument, whereby moylt things are injected into the fundament, it hath many holes quite through it, and these from the matrix are called *Matrembite*: But *Acetius* speaks clearer thus. To which purpose you must provide a horn Pipe that is full of holes through it, large at the bottome, and convenient for the largeness of the place, which being thrust in beyond the Sphincter of the Anus, we fill with juice of Cedar, so that the liquor may flow forth every way. But forasmuch as these Instruments are unknown to us, when remedies are given either to kill or drive forth Worms, stop the childes nostrils, and then wash its mouth with some sweet or sharp thing; and when he hath drank down the medicament to kill the Worms, his stomach must be fomented with Acacia or Hypocistis with wine. Those things that kill Worms are best given in sweet milk or honey or Ozymel, or Syrup called *Acetis*. Some first satisfy the children first with three dayes drinking of them, and then they give the physick afterwards. Also they give Clysters of the same sweet things; that they may entice those Creatures to the lower parts. If the belly scowre, it is of necessity that the Worms must be killed at last, for the motion of the belly will cast them forth. But when the appetite is hurt, and the belly loose, the Worms must be killed with bitter things only, that are somewhat astringent, as with Wormwood amongst hot things, or Southernwood and Worm-seed: Or amongst cold things, with Pomegranate pills, Acacia, juice of Plantain, Purslane and such like.

Of hot things the seed of Cresses drives forth all belly-worms, bruised and drank in wine or Vinegar, yet more effectually if wilde Mints be added, yet it troubles the belly. The meal of Lupines licked with honey or drank in Posca, and outwardly applied to the navel with Bulls gall, drives them forth. The same also being infused and eaten with their bitterness, wil do the like. Also their decoction can do as much, being drank with Rue and Pepper. Sea Worm-wood boyled by it self, or with Rice, adding Honey to it, kills Worms in the guts, and it wil do it better with Worm-wood. Southernwood doth the same by its bitterness; Cardamomum kills them. Also the decoction of Hylop drank, or the herb it self licked up with Honey. So Calamint kills *Ascarides*, and other VVorms, if it be drank with salt and honey, or if it be eaten raw or boyled, or the juice of it given in a Clyster, or drank. Also the decoction of Thyme, or Rue boyled and drank with Oyl forceth them out. Also wine of Cedar, and the liquor of Cedar it self. Unripe oyl of Olives, if it be drank plentifully, for it is pressed out unripe for children. Juice of Oenanthe bath the same operation, as oyl of unripe Olives. But the best thing against VVorms are sweet Apples called *St. Johns* Apples, for they loosen the belly, and drive out the VVorms; which by what faculty they can do it, (being they are sweet, and of a honey taste, from whence they borrow their name, and since for they should rather feed VVorms) is perhaps, because by this meat the belly is made loose, and the VVorms follow; and the VVorms that otherwise would stay within, by the force of the excrements, as Fishes in a torrent are carried away, when in Summer great rains fall, and so are they carried downward. For *Dioscorides* lib. 1. cap. de *Melimela*, saith that those Apples make the belly soluble: Also the seed of Coleworts, especially that which grows in Egypt, drank, drives forth VVorms, namely, because the temper of it is drier, and more wilde. The same is done by Oyl of *Palma Christi* drank. Myrrhe also by its bitterness both kills and drives them forth. The decoction of Elecampagne, Squils taken with Vinegar and Honey, but the Squils must be first roasted, or otherwise it is held to be most pernicious to the entrails. Also they use to give against all VVorms the decoction of the root of Capers in honey and vinegar. And *Dioscorides* lib. 4. cap. 1. writes, that the herb called *small Turn-soil*, drank with the seed, adding thereto Nitre, Hylop, Cresses, and water, wil force out all sorts of VVorms, long and flat. But *Paulus*, unless there be an error in the Text, reckons Cardamomum for Cresses, lib. 1. c. 1. Rocket-seed in wine, wil drive out all living Creatures.

tures bred in the body. Also seven or five Earth-worms drank with sweet wine, will drive out all kinde of VVorms: Bitter Almonds and the Oylis good. Agarick with Honey, but it purgeth with trouble; for it is hurtful to the stomach, by making it slippery and loose. Storax swallowed with Roſin of Turpentine: Aloes drank in cold water or milk, the same drank in a decoction mingled with Honey, brings them forth without trouble. The seed of Tithymal or the juice of it about five drops mingled with Figs or Dates. The leaves of Agnus Castus, Polyode, Chame-pythe, Centaury the lesse, bruised and drank with Vinegar. Also one peny weight of the root of the same drank in three Cyathi of wine, doth help. Horehound with Wormwood and Lupins, boyled in water and Honey, of each alike, and with wine applyed twice or thrice, kills all Worms in the belly: Coltus by its bitterneſſe, with water kills all Worms. But *Discofides lib. 1.* writes that it drives out only broad VVorms, with water and honey; which place *Marcellus* interpreting, blots out that word [and honey] as put in amisse, for this reason, because it is contrary, and seems not to agree with the cure for VVorms. For faith he, they are raised and nourished by sweet things, and belly VVorms are not driven forth by them, unless perhaps Honey must be therefore added, that they being deceived by the sweetneſſe of it, they may take in the bitter Coltus in greater quantity, as we use to do in curing children, when we give them bitter or strong potions, we cover them with some sweet favour, or pleasant smell. In which business he seems to seek a knot in a Bull-ruſh (as we read in the Comedy) and yet he confesseth it to be otherwise. For whether the word Honey be read in *Discofides* or not (for I am not yet certain of it, nor hath *Racemius* set it down) it is sufficient that bitter Medicaments, (such as Coltus are, and such like) were given alwayes almost by *Discofides*, *Pliny*, *Galen*, and others, for to cure Worms, with sweet things, and chiefly with Honey, or Mede, or Oxy-mel, for the same reason that *Marcellus* mentioneth, *lib. 4. cap. 57.* which *Paulus* added in these words. Because some men oft times refuse bitter potions, as having an ill taste, of these thing herein comprehended, they shall not give any that are manifestly bitter, but mingled with some sweet thing, as he said a little before, that all these medicaments must be mingled with Honey or Oxy-mel, and so given to drink: Oras *Lucretius* saith, that the improvident Age of young people may be deceived, or else may be able to take it, being enticed by such a taste. For children most commonly are subject to Worms. Therefore nothing hinders but that the word Honey should be added, as *Marcellus* himself testifies, if we read him in some old Copies. Likewise a Cantharis bruised, and drank with a Briony root, drives forth Worms, as *Galen* writes, *lib. de compoſ. Theriaca*. Of cold things, the juice of Moule-cary, with Ale, of each one Cyathus, Groundſel eaten, the juice of Plantain, especially when the belly is loose, given one spoonfull or a small measure to drink, and the herb itself bruised, laid to the navel. Coriander seeds with the juice of Pomegranates and Oyl destroy the Worms in the guts, or drank with sweet wine. Hot things, as boyled Beets, taken with raw Garlic, by the Nitrous quality it hath, brings them forth, but the juice is hurtfull. A Pomegranate bruised, and boyled in three Hemins of wine to one Hemina, drives forth Worms, takes away the pain, and the juice of the root one dram and half weight, will kill them. Sumach of Syria will do the same, and the seed of Orache. Our new writers adde, that it is manifest by experience, that the sharpest Vinegar drank when we go to bed will drive out the Worms. But amongst those things that prevail much, is *Corallina*, so called, which being powred or mingled with Honey or Oxy-mel, or drank with Honey-wine, doth wonderfully kill Worms, or drive them out half dead. This took its name from the likeness of Corall, since both of them grow in the water, and for sixty years almost it hath been used to good purpose to drive forth Worms; if I be not mistaken, this is that which *Discofides lib. 4.* and *Galen* call *Agus heratmos*, that is, Sea-moffe; and if that they did not attribute to it the same force we do to drive forth Worms, as we see in *Corallina*, as they call it, I shall not therefore think that it is any thing else, besides *Discofides* and *Galen* say: For the Antients did not know the virtues of all Simples, for the true nature of each cannot be found out by any other way, than by its effects in physick. A mighty work and secret from God, than which there can be no greater found out. Also many things are found now adays that were not found out in our forefathers dayes; and no wonder, since these experiments are made by Country-men, and such as are ignorant of learning, who commonly live only where they grow, besides the negligence of seeking, when there are so many Physicians at hand every where. Also many things are found, out that want names: To this we may adde the uncertain way of finding out; for in things that are found, some were found by chance, saith *Pliny*, *lib. 25. cap. 2.* others were revealed by God. But the fouleſt cause of this rarity is, that they who know things will not discover them, as if they should quite lose what they acquaint others with. They are as envious indeed as those are who either suppress the monuments of Antiquity, or else utterly demolish them; which they for that end, that what is written by the Antients may be attributed to themselves, or if they have delivered any famous matter, they that write other mens opinions will let that be lost. But if there be any that will contend, and say it cannot be that they should be ignorant that Sea-moffe was good to drive forth Worms, to those I answer, that the Antients did not commit to writing all the natures of Simples that they knew. For we know many of the precepts of *Pythagoras* and *Socrates*; which yet cannot be known out of their Books, because they wrote none. And *Plato* though he left so many Books in writing, yet besides those he wrote, his followers take many things for his that he never put in writing. Nor hath that *Erys* growing in every place, as they report, the same faculty, but the Apothecaries in some certain places of Italy fish for it, and they sell it under the name of *Corallina*. But let this suffice.

Cold Simples  
against  
Worms.

This is rather to be enquired into, why, being that *Corallina* taste salt, *Discofides*, *Pliny*, *Galen*, and others report it to have a cooling faculty, when as it is known that all salt things are hot, and earthly, not unlike to bitter things that are hot? Whether it be, because the sea-water is salt, yet hath in it a great deal of potable water (as *Aristotle* hath sufficiently demonstrated it) and therefore by that it is the less hot? Or else because it contains in it much earth, and so it is drier and thicker? But such things as grow in the sea, must needs be of the same faculty with it. Because therefore that Sea-moffe grows in the sea, *Discofides* and others attribute to it a thickening quality, but as it contains in it much water fit to drink; and as it is of an earthly quality, by that it cools. Lastly all that are troubled with Worms, are helped with the smell of the hair of Ichneumon (they call it an Indian rat) as *Paulus* writes.

The juice of Houſleek drank in Wine, will drive out of the belly round Worms: Wormwood Wine drank doth the same. The herb of great Turnſoil drank with its seed, adding thereto unto Nitre, Hylop, Cresses, and water, will cast them forth. The root of female Fern, being forth 3 drams drank in Wine, will force out the round and broad Worms of the belly, as *Ruellius* Worms round, and *Aleacellus*, who interpreted *Discofides*, do both affirm. But *Galen* saith that it kills not Ascarides, and round Worms, but Ascarides and broad Worms, for so he writes, *lib. Therapeut. method. cap. 14.* broad Worms. But Wormwood can destroy round Worms: broad Worms require more strong helps, as Fern is, and so doth that Worm the Greeks call *Acisoides*. *Theophrastus* was of this opinion, who writes that female Fern mingled with Honey is good against broad Worms of the belly, if it be mingled with Honey; and for Ascarides, in sweet Wine. For so he sets it down: Female Fern is good against broad Worms and small ones: against broad ones mingled with Honey, but against small ones in sweet Wine. It is certain that Ascarides both are, and are called small Worms. Moreover, *Galen lib. de simpl. Medic. facult. 8.* ascribes the same virtue to the female Fern, that the male hath. Now *Pliny* writes that the female will kill only broad Worms and not round. *Plin. lib. hist. 27. c. 9.* And again, that both, (that is, both male and female) will drive forth Worms of the belly, broad Worms with Honey, the rest with sweet Wine drank for three daies, and he excludes neither round Worms nor Ascarides. But *Galen* in one place excludes both round Worms and Ascarides; and in another place he writes that it will destroy Ascarides with broad Worms. What now shall we say, where Authors are of so many different opinions? Shall we say that female Fern will kill all Worms in the belly? For *Galen* ascribes the same virtue to it he doth to the male, but that especially it kills broad Worms, and in the next place Ascarides, which being at the bottome of the belly, require a stronger remedy, as Fern is, that the force of it may come so far. But since it can drive forth broad Worms and Ascarides, that are more seldome, and the one is in the guts, the other farthest from the stomach, it will far sooner destroy round Worms that lie in the upper guts. *Galen* therefore will not fight with himself in this, for it sufficeth if it will kill broad VVorms, and if it can destroy them, it can more easily destroy Ascarides, and easiest of all round VVorms. But *Pliny*, as who best of all knew that, saith it will drive out the rest also, (that is, both round VVorms and Ascarides). But that he saith so is manifest out of *Paulus*, *lib. c. 58.* who in his method of curing round and broad VVorms, mentions Fern: which yet all men agree is most properly used to drive forth broad VVorms. *Alexand. 16 Tertii trad. 5. c. 4.* shewes this most clearly in these words: The medicaments that kill Ascarides are stronger than those that kill long Worms; and those things that kill long Worms and Ascarides will also kill broad Worms. Gith or Nigella not only eaten but laid in a plaister to the belly, or anointed on the navel with water, brings them forth. In which place we must note *Marcellus*, who saith it will drive forth broad VVorms and not round: but *Ruellius* interprets this by the contrary. If *Marcellus* have done right, I leave other men to judge, this is certain that *Galen* is of *Ruellius* minde, who hath written only that it will kill VVorms; and as I said before, it is taken generally for round VVorms. *Paulus* and *Aetius*, agree with *Ruellius*, who in their curative method for round VVorms, often speak of Gith, but never for broad VVorms. Wormwood called Santonicum, of it self or boyled with Rice, adding Honey to it, will kill Worms. The seeds of Nettles bruised, or of Coleworts or Cummin, with water, or Mints with it, or Hylop with Honey and water or Cresses-feed bruised with Vinegar, kills them. *Celsus l. 4. c. 17.* *Orisbanus lib. ad Empirium filium*, hath written that Calamint, Cardamom, Lupins, and the powder of them in drink, or with Honey by way of Electuary, or given in Polca to drink, are sufficient to kill round Worms. Also the leaves and buds of the Peach-tree bruised, and laid upon the belly can do as much; also Mints in drink and Sorrel. Purslain boyl'd, the juice of Succory, or the decoction of Sebestens, or the Sebestens themselves boyl'd and eaten are very good. Also the ashes of burnt Harts-horn is thought very effectual for this use, especially of that which grows on the right side of the Stags head. It is burnt thus: Break the Harts-horn, and put it into a new earthen Crucible, and lute it well, put it into the furnace and let it burn till it be white. *Scribonius Largus, c. 141.* gives it thus: Harts-horn, saith he, raspe with a workmans raspe, with water of Sebestens boyled, give 4 or 5 spoonfulls of it, which were soked the day before in 3 cyathi, then bruise and give it, adding the water to it. An Oxe shank burnt, and drank with Milk, drives out round Worms, saith *Galen*. Coltus with water drives forth broad Worms of the belly. *Galen de com. Ther. ad Pif.* Cardamom, Garlick eaten. The leaves of female Fern taken with Honey in a Lobock. But the root of the male 3 drams with Honey-water drank, will drive them

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them forth, but better, if it be given with so many oboli of Scammony, or black Hellebore, also the root of white Chamæleon, drank a fawcer full, for which use it is drank with sharp Wine and the decoction of Origanum. Walnuts eaten largely, the pill of the Mulberry-root boyled in water and drank; besides that it loosneth the belly, it will force out broad Worms; also the decoction of Pomgranate roots drives them out and kills them. The decoction of Pomgranate pills can do as much. The root of wilde Bugloss a fawcer full, with Hylof and Cardamom drank, doth the like. *Ruellius* the Interpreter of *Diopscrides*, seems to have followed *Paulus*, who say that with Hylof and Cardamom: but *Marcellus* saith, with Hylof and Cressles drank, it will drive forth broad Worms, what was said before of Turnsoil. *Marcellus* seems here to follow *Galen lib. 6. de simp. fac.* who writes that a fawcer full of it is good drank with Hylof and Cressles. But the juyce of Cedar kills Ascarides, and so doth Calamint, the juyce of it being drank or given in a Clyster. The decoction of Wormwood, mingled with oyl and given Clyster-wise, and the decoction of the lesser Centory given with Salt-peter and Honey, hath the same force, or the decoction of the wilde Gourd, of wilde Saffron, if the right intestine were first emptied with sharp pickle. The root of female Fern drank for three daies in 3 drams of Wine, drives forth Ascarides. Also old Hogs greafe put into the Anus, is excellent good.

Both *Paulus* and *Aetius* testifie that Feavers commonly accompany round Worms, and we found it true by daily experience. When therefore there is a Feaver, sometimes we must take care to cure the Feaver and the Worms, and sometimes taking little care for the Feaver, we must strive to drive the Worms out of the belly. For many that have neglected them have died torn and eaten up by them, and some say they have seen them come forth at the groins. But we must first kill them all, and then drive them forth; they are killed chiefly with bitter things. When therefore the cure is common both to the Feaver and the Worms, the more simple remedies are convenient, and where the disease is uncertain we must use things that are more milde. For the Feaver is exasperated with strong remedies if we should be mistaken; but when we are certain how the matter is, we must wait for the times of the disease. For about the first daies, and the rather if they should appear then, we must use stronger remedies. But those that appear when the disease declines, are more easily cured, and the better if there be no inflammations or tensions of the bowels. As *Hippocrates* saith well, *lib. Aph. 1. cap. 24.* In acute disease but seldom, and that at the beginning we must use purging Medicaments; and this must be done with premeditation, for these swell most, and are agitated as 'tis often seen, and therefore about the beginning of those diseases, we may use sharper means with profit, but there must be much caution, and premeditation used therein. First examining whether the patient can endure such remedies, and be prepared rightly for them, and whether we may expect a right Crisis by giving them. For there is no small danger in an acute disease, as the sickness of Worms is, to use sharp remedies, because all such means are potentially hot. Therefore they that suffer inflammations and extensions, must have Cataplasms of Linseed, with the like quantity of meal of Lupins mingled, or else moist fomentations of oyl of Camomil, Wine, tops of Wormwood, and Aloes laid to their Præcordia; but where moderate Feavers molest, give children before all meats, the decoction of Myxato-drink, or give them the Sebelens themselves to eat with Mints. For these things wonderfully help those are troubled with Worms, either because, saith *Scrapin*, they stick by reason of their sweetness to them, or else these are so glutinous, that they cannot be parted from them, and so must come forth with them. For Myxa are very clammy, that in Syria the best birdlime is made of them called Damask-birdlime: wherefore because by the clamminess they bring forth Worms, if they trouble the stomach, they must be given by the mouth; but if they be in the belly and guts, by Clyster: but to such as are come to ripe years, stronger remedies may be given, as the decoction of Wormwood or Southernwood, or the force of the root of the sower Pomgranat boyled to thirds, also three scruples of waste Aloes is given, which is the most commendable remedy for those that are strong: also we use unwash Aloes, and both, if they be feaverish, and but three moneths old. Earth-worms with boyled sweet Wine may be given confidently; but if they will not drink sweet wine, give them with water and honey, or as you think fit, fearing nothing, not despising the meanness of it, give 5 or 7. But it be not a naked suspicion, but a certain knowledge that there be Worms, and that a proper cure belongs to them, then you must lay on Cataplasms with Lupins meal boyled in sweet Wine, to which also sometime a root of Briony must be added. In the mean time anoint the navel well with Buls gill, or Gith bruised with womans Milk, or with Wormwood, or Southernwood, or Briony mixed with fat old Figs: anoint also the *Spina dorsi* with Deer-suet, and cover the upper belly with a Cerate made of Wormwood and Cypres oyl. Moreover a Suppofitor must be put up where the belly is bound, especially for children, and if it profit not, then give a Clyster, the vigour of the disease abating, made of the decoction of Wormwood, or Southernwood, or Centaury, with Honey and Nitre. And we shall endeavour to draw them out by supplings, that make the passages slippery, such are oyl of unripe Olives, supping up by little and little two spoonfulls of it, for as it is bitter it kills Worms, and as it is glit it draws them forth with the dung. But we must always increase the potions of oyl for they are very commodious. The Worms come forth, some yet alive, but they are giddy, and as we may say half killed, and many come out dead with the excrements. Moreover Worms will breed when there is a scowring of the belly, we must cure

them by stopping the flux, and by bettering the concoction with meats and Cataplasms. For the more the flux growes, the more the Worms breed; and when the flux ceaseth, the Worms do the like: wherefore we must diligently endeavour that the belly may be stop and strengthened; we must therefore add to such Cataplasms as serve to stop other fluxes, such things as we said to be good against Worms, and that cause no fluxes, such as are Wormwood, Southernwood, Santonicum; also Pomgranate pills, Acacia, Hypocistis, Balautia, and the like, with raw Barley-meal. Also Cerats laid on must be made of these. Also supplings must be used amongst all which the juyce of Plantain is best; and the dry Plantain, for it is good both against the flux and the Worms. Farthermore the VVine of the Pomgranate pressed forth with shell and all helps exceedingly. But for nauseating that ariseth from VVorms, and gnawing of the stomach, a grain of Salt held in the mouth, and melted and swallowed down, profits wonderfully, for it should seem the tartness of it, makes them presently fall down. But if a hiccup arise from the same causes, pills are good, that have the juyce of Ridder-spin, Wormwood, Santonicum, Water-mints, Scordium, of each four penny weight, boyl them to the thickness of Honey, then add fifty penny weight of powdered Aloes, and make pills of all, and swallow a penny weight, for this will take away the hiccup, and kill the Worms. But if from the Feaver or filthy vapours arising from Worms, or the fumes of Medicaments (as most of those are that are given against Worms) rise to the head, so that there be great pain thereof, then anoint the forehead of the head, the forehead and temples with oyl of Roses, or the juyce of Acacia, or of Hypocistis mingled with it, for it is most effectual. Others lay on heaven with a little Saffron and Vinegar, on these parts being anointed: for this cures all intemperate sleep, and other perverse affects. But amongst those men call Syrups, syrup of Wormwood, Calamint or Horehound are commended: or make one thus: Take juyce of Mints, Elecampane root, Wormwood, Rue, purified, for it is taken the sediment being cast away, of each of them half a hemina in weight; of the juyce of Succory and Grafs, of each of them seven cyathi in weight, infuse in these torrefied Harts-horn, Sumach, Purllain seed, and flowers of wilde Pomgranates, strain the decoction and make up all with Sugar, or the purest Honey of *Athens*. Another: Take Southernwood, Calamint eight penny weight, Horse mints, Elecampane-root fresh, six penny weight, boyl them in water to a third part: this decoction is given with syrup of Wormwood, or Oxytel of Squils. Also Wormwood-wine is much commended for these uses, but it is made divers waies, for some let down Celick nard 40 drams bound in a linnen clout, into a measure of new Wine; and after 40 daies they strain it. Others cast a pound of Wormwood into 20 sextarii of sweet Wine, and a sixth part of Pitch, Rosin, and after ten daies they strain it, and lay it up for use. A syrup against Worms, with a Feaver and the symptoms: Take sixteen penny weight of Grafs-roots, Purllain-seed, sower Dock, of each eight penny weight, ten Sebelens, boyl all to thirds, to these add the juyce of Pomgranates, and Oranges, or sower Wine, of each one and half cyathus in weight, as much of juyce of garden Succory, the best Sugar what may suffice, boyl them to a syrup: you may give Infants half an ounce, and young children one ounce without danger. A Julep that shall help those are affected with Worms: Take Dittany of Crete, Gentian Zedairy, Arabian Costus, one penny weight, seeds of Coleworts, Dill, Wormwood, Purllain, of each alike as much; water of Mints, Wormwood, Grafs, of each half a hemina weight, boyl them to thirds and strain them, to these add of the best Sugar twenty penny weight. But in a Feaver you may give the decoction in water, or Grafs-roots, Wheat, Barley, of each fifteen penny weight, to a large quantity to drink. Another most effectual and very sweet: Distilled water of Sorrel, Roses, Grafs, garden Endive, Bugloss, juyce of Pomgranates, of each or a hemina weight, seeds of Purllain, Orach, Sumach, Citrons, of each three penny weight; Coriander-seed, Myrtle-berries, wilde Smalage, of each two penny weight, seeds of sower Dock, Coleworts, Cummin, of each the same weight; red Roses, Tormentil, Barberies, of each two penny weight, so much weight of Balautia, five penny weight of the ashes of burnt Harts-horn, white Dittany of Crete eight penny weight; the shels of Mulberry-roots barked, Fern-roots, of each two penny weight, ten Sebelens, one penny weight of red Coral, white Sugar what may suffice, make a Julep. But the most present remedy of all is that the Apothecaries call commonly *Diaturpethum*, but chiefly with Rhubarb, three drams of it being swallowed down; which being it is proved by long experience, so it hath also great reason for it, that it should be preferred before all other remedies. For children enticed by the sweetness of the Antidote, will take it down willingly, and the Rhubarb kills the Worms, and the parts are strengthened by it. The Turpeth drives them from their nests, and the rest of the ingredients do not only make it pleasant but harmless, so that it is most sweet, harmless and strong all at once: it is made thus: Take white Saffers and red, Violets, Ginger, of each two penny weight; Anniseed, Cinnamon, Saffron, Miltick of Chiue, each one penny weight; Myrrhita, which the Apothecaries call Turpeth, eight penny weight; Rhubarb, ten penny weight; Scammony as it is usually prepared, four penny weight, the purest Sugar 190 penny weight, make up all with that and make Troches (as the Greeks call them from the form) each three drams weight, where you have need of them, give one for this disease. Another Antidote: Take Rhubarb, Saffron, Scammony, Wormseed, Dittany of Crete, each two penny weight, the best Sugar eighty penny weight, make them up with Grafs-water, and make Troches; one penny weight of this is given to Infants without danger, being dissolved in Grafs-water: The powder I use is good, and a powder thus prepared: Take Rhubarb, Agarick, Germander;

of each two penny weight, Sea-moſs four penny weight, Wormfeed and Purlain-feed of each two penny weight, unwashed Aloes fix penny weight, give a ſcruple of this or two oboli in Wine to children faſty. Sometimes alſo theſe are bruifed and ſifted and made into pills with the juſce of Wormwood or Mints, and three of them are ſwallowed down. *Another for the ſame by another Author:* Take Harts-horn burnt, the leſs Centory, Mints, Penroyal, Water-mints, Wormwood, Santonicon, Germander, Lupins, of each four penny weight, bring all to very fine powder and give it with Milk, Vinegar, or Oxymel, or any way. *Another of the new Writers that is approved:* Take Rhubarb, Coriander-feed, Baſil-feed, Plantain, Pomgranate pills, Carway-seeds, Sumach, of each two penny weight, Carduus Benedictus feed, thavings of Harts-horn, and of Ivory of each eight penny weight, the bark of the roots of Mulberries pill'd, Colewort-seeds, Citron Apple-seeds, bark of Willows, of each fix penny weight, Purlain-feed, Dittany of Crete, four penny weight, bark of Pearls, red Coral, of each two penny weights, dry them and bring them to fine weight of each, Pearls, red Coral, of each two penny weights, and where there is no Fever, or with powder: one or two drams of this with Wine in winter, and where there is no Fever, or with Oxycerate in ſummer or to thoſe that are in a Fever is ſafely given. An Antidote that kills Worms, diminisheth a Fever, and helps againſt pains of the heart: Take Wormfeed, Sea-moſs, feed of wilde Smallage, Harts-horn burnt white, of each alike, infuſe them all three daies in Vinegar, wherein let theſe things firſt boyl, Purlain-feed, Sorrel-feed, Sumach, Coriander, Colewort-feed, and a little Myrrhe; then dry them, and add to them Orange-seeds two parts, Citron-seeds one part, make them up with Sugar diſſolved in the Wine of Pomgranates, and ſeale morſels, to which you may add ſome little Cinamon and Muſk. But becauſe it hath been ſeen oft-times that Medicaments outwardly applied have done much good againſt Worms, it is but reaſonable that I ſhould ſet down the manner of them: For by theſe we not only defend but reaſonable that I ſhould ſet down the manner of them: wherefore this may ſuffice our bodies, but alſo we kill the Worms and drive them out dead: wherefore this may ſuffice that hath: Lupin-meal, leſs Centory, leaves of Peach-tree and Horehound, bruife them with Poſea and lay them to the belly. *Another tried by our newer Phyſicians:* Take the leſs Centory boyled in the oyl of Peach-kernels, anoint the Navil with this, and it will drive forth the Worms. *Another:* Toſt Barly-bread, and infuſe it in Vinegar, then preſs it out, and infuſe it again in the juſce of Peach-leaves, lay it on warm to the belly with a linnen clout. Others mingle Lupine meal, Southernwood and Buls gall. *Again:* Take Lupine-meal, Centory the leſs, of each four penny weight, Aloes, Buls gall, of each 4 oboli, make them up with juſce of Wormwood, and laid to children very young. *Another:* Take Wormwood, Gith, aſhes of Harts-horn, of each a like quantity, mingle them with Honey and anoint them. *Another good for the ſtomach, that kills Worms, and is good againſt the belly flux:* Take Wormwood, Mints, Roſes, Santonicon, Lupin-meal, of each eight penny weight, rolled bread, infuſed in the ſharpeſt vinegar four penny weight, Buls gall ſixteen penny-weight, Mountain-nard, Water-flag, (Gallia called Moſchata) Cloves, ſweet Cane, Nutmeg, Galanga, Carway-feed, of each twelve penny weight; Hippocryſis, Acacia, Sumach, of each four penny weight, oyl of Myrrhe, juſce of Mints, and Wax what ſufficeth, make a plaſter. If there be no Fever, the navil and thighs are to be anointed with Honey, in a hot aſpect with Milk, and then a little Aloes is ſtrewed on, for it wonderfully kills Worms, alſo the noſtrils are profitably anointed with Theriac and Vinegar. *A Cerate againſt Worms out of Paulus:* Take Aloes, VVormwood, Lupin-meal, Seriphium, Gith, of each ſix ſcruples, VVax an ounce and half, oyl of Camomel what may ſuffice, make them up being bruifed dry with Buls gall. *Another out of Aetius:* Lupin-meal, VVormwood in powder, Barley in fine powder, of each ſeven penny weight; Buls gall, eight penny weight; raſping of Harts-horn, four penny weight; VVax, twenty ſix penny weight; weak oyl, twelve penny weight. *Another approved:* Take Aloes half an ounce, Saffron two oboli, juſce of Pomecitrons as many drams, mingle them with ſweet white VVine, and apply them to the heart. *Another approved:* Take Buls gall, 30 penny weight, choiſe Frankincenſe 128 penny weight, Strong-water 2. heminx, diſtil all theſe che-mically and in a glaſs veſſel covered with VVax, keep what comes forth, and uſe it when occaſion is. *Another very excellent, that kills and caſts forth the Worms:* Take VVormwood, Gentian, Centory the leſs, bark of the roots of Mulberries, Bay-berries with the kernels taken forth, bark of the roots of the Pomgranate-tree, Aſh-root pills, of each 16 penny weight; Marjoram 14 penny weight; Southernwood Aloes, Myrrhe, Agarick, of each 12 penny weight, Dittany of Crete, Germander, Savin, of each 8 penny weight; Poly-mountain, Graſs-roots, each 10 penny weight; Starchas, Chamadrys, Chamapity, Pomecitron-feed, each 6 penny weight; aſhes of Harts-horn, Santonicon, 4 penny weight, Coloquintida-feed, 2 penny weight, Buls gall 24 penny weight, the ſharpeſt Vinegar 1 hemina and 3 cyathi, a gallon of bitter oyl of unripe Olives, and 6 heminx; let the dry things be beaten into moſt fine powder, and mingle them ten daies together, on the eleventh day let them boyl in a double veſſel until the Vinegar be conſumed; when theſe are cold, add one hemina of oyl of Bayes, bitter Almonds, and Peach-kernels, of each beaten 24 penny weight; all theſe, as the former, muſt be put into a glaſs veſſel, and be diſtilled. *Another moſt excellent and ſure:* Take Peach-kernels, Garlick, Earth-worms waſhed in Vinegar, of each 24 penny weight; Gentian, Dittany of Crete, Graſs-roots, and Piony, pills of Mulberry roots pill'd, of each 52 penny weight, Saffron, ſweet Cane, Cloves, Aloes, Calbanes, Coloquintida, Ginger, Nutmegs, Caſſia, long Pepper, Frankincenſe, fruit of Baſilome, red Coral, of each 8 penny weight; the beſt Theriac 12 penny weight, Mints, Wormwood, Centory the leſs, Peach-tree leaves, headed Leeks, Penroyal, Calamints, Plantain, Rue, black Hore-

Compound external Medicaments against Worms.

Horehound, Bay-leaves, Sage, Marjoram, Betony, Scordium, Orange-pils, and bark of Mulberry roots, of each 16 penny weight; ſeeds of wilde Smallage, Purlain, Radſh, Coleworts, Santonicon, Plantain, headed Leeks, ſea Moſſe, garden Smallage, (that is, Purlly) each 12 penny weight; the ſharpeſt Vinegar, juſce of Quinces, of each one hemina; oyl of Mallick, Spike, liquid Bitumen, (they call it *Petroleum*) oyl of Bayes, of each 16 penny weight; the oldeſt Oyl, or oyl omphacine, 8 heminx; beat the dry things to powder, and mingle them, and in a glaſſed veſſel ſet them under Hore-dung for a moneth, then boyl them in a double veſſel to thirds, ſtrain them when they are cold, and ſtraining them out forcibly, keep in a glaſs, what comes forth for your uſe. But employ it thus: firſt anoint the temples, then the noſtrils, next that the ſpondyls of the neck, four of them next the throat, then anoint the pulſes of the arms, next to that the ſtomach, I mean by the ſtomach the mouth of the ventricle, taking the word ſtomach improperly, for properly it ſignifies the throat; wherein I muſt not paſſe over the error of our new Phyſicians, who in affects of the mouth of the ſtomach, lay their remedies upon the back over againſt it, which is both contrary to *Galen*, and alſo to reaſon, 2. & 10. *de morb. cur. libro.* yet I believe *Thomas Linſec* did not rightly interpret that place; if I be not miſtaken, who was indeed otherwiſe a very learned man, and moſt ſkilful in the interpretation of Authors; but it may be that a Greek Book was faulty, or for ſome other reaſon. Alſo it ſeems agreeing to reaſon, that for affects of the mouth of the ſtomach, the remedies ſhould be applied before, immediately under that round gristle, which they call the ſhield or ſword-faſhion gristle, for at this place the mouth of the ſtomach beſt receives the force of Cataplaſms and Cerats, forasmuch as there are no bones to keep it off, but the properly called ſtomach, that is, the throat is fenced with moſt thin bones, as under a fence; for it hath the beſt bones before, and the back behind. But this is ſpoken by the by. Now between the wetting of one place, and of another, we muſt uſe more diſtance of time, when we anoint the reins and the navil. And theſe three remedies are ſo certain, that unleſs a child be ready to die, he will recover from the point of death only by anointing theſe parts. That which is called the broad Worm abounds in thoſe that have no Fever, and breeds The Cure of in long during diſeaſes. The method to cure theſe is the ſame as for round Worms. For broad Worms, bitter and ſharp potions are moſt in uſe, and to eat Garlick or Calamint, Dittany or Penroyal; we muſt eat Garlick largely for three daies, and old ſoft Cheeſe. Next let a man eat of *Mace*, *Celſus*, *Oribiſius*, *Scritobolus*, *Paulus*, and *Aetius*. *dotian* Fern dried and powdered and ſifted, 8 penny weight, with as much Honey as he pleaſe; after four hours give the patient Aloes, and Scammony, of each one half dram, in Honey-water 4 cyathi, when he begins to riſe to ſtool, ſet hot water under; Alſo give water to drink in which Lupins, or the bark of Mulberry-tree is boyled, or to which there is added a ſawcer full of Pepper, or bruifed Hylop, and a little Scammony: or elſe after the eating of Garlick we ſpeak of, let him vomit, and the next day let him gather as many Pomgranate roots as he can hold in his hand, and bruife them and boyl them in a ſextarii of water, to a third part remaining, let him put a little Nitre to this and drink it faſting; three hours then paſt, let him take ney of 3 oboli, or half a dram. *Virginius*, in a ſextarii of water, to a third part remaining, let him take ney of 3 oboli, or half a dram. two Potions either of water or ſalt pickle added to it; Then pour forth the hot water into a baſon, as I ſaid: alſo give Earth-worms to drink, for they are exceeding good. But the juſce of mouſe-ear is proper for them, drank two cyathi with one cyathus of Ale: for it quickly drives forth the broad Worms. But this remedy following muſt firſt be drank; nor is it thought unfit for thoſe that have Worms, eſpecially if they have no Fever. Out of *Paulus*. It conſiſts of red Nitre, Pepper, Cardamoms, of each equal parts, mingle all theſe and give of them a ſpoonfull in Wine or hot Water, for it quickly brings them out.

*Another*, which is an Electuary of *Paulus*. Take Pepper, Bay-berries cleaned, *Ethiopian* Cummin, Maſtick of *Ghies*, of each alike, Honey what may ſerve turn, give one ſpoonfull in the morning, and let them ſleep upon it; but if you would do this more effectually, add Nitre as much as of each. Another of the ſame. Take Fern a ſawcer-full, Nitre two penny weight, give it with a ſpoonfull of water, after evacuation, but it is better to add a little Scammony to it. Another of the ſame, and of *Aetius*. Take of the bark of the root of a ſowre Pomgranate, ſcraped from the upper part, Pepper, of each four penny weight, Cardamoms ſix penny weight, Horehound two penny weight, the beſt Honey what is ſufficient, give one ſpoonfull of it after eating Garlick or Leeks. But that the diſeaſe may be wholly driven away, give ſome Theriac, for *Galen* highly commendeth it for this uſe. *Another out of Oribiſius*, that he alwayes uſed by the experience of his maſters, and had a long time proved it for good. It contains Scammony one ſcruple, Euforbium as much and half as much, the powder of burnt feathers one ſcruple, Nitre in weight one Siliqua, give this to drink in honey'd or ſweet wine. But it will fall out better if he firſt eat Garlick or ſome ſharp thing. Alſo here is a Plaſter of another Author, that is good againſt all Worms, eſpecially broad ones. Take Lupines, Bay-berries cleaned, Buls-gall, lay theſe on the navel, and binde it on with a ſwaſheband for one day and night, or elſe for two or three daies. Againſt broad Worms from another Authour. Take Southernwood, ſcraped Harts-horn, *Coccoligridius*, and *Sesamum*, of each one penny weight, Cardamoms three oboli, give this to drink with Oxymel. Another for the ſame uſe. Take Gum Arabic, one penny weight, Fern three penny weight, Cardamoms one penny weight, Nitre three penny weight, give it in Hydromel or Ale. Alſo againſt the ſame, is the Antidote called *Diaphereon*. Take Fern eight penny weight, Scammony, Gith, Cardamoms, ſalt Nitre, of each two penny weight,

weight, give it in Oxyssel or Ale, but add Polypode four penny weight. It is reported, that *Ascarides* will trouble children, and such as come to their full growth. But children are continually provoked to excretion, and after egestion they are the better most commonly, but those that are come to their full growth, observing the trouble of such things that are the cause of them, will thrust their fingers into their fundaments, and pull them forth, and further they will foment and abate these biting pains, with pebble-stones that lie in the Sun on the shores, or else with stones put into the fire. But some for fear will admit of none of these helps; yet this disease ought not to be neglected, for Worms will not easily yield to remedies, nor are they easily driven forth, but by strong means. Wherefore children must be purged with Suppositaries made of Honey and a little salt, or Nitre, or sharp pickle, or with the decoction of Wormwood mingled with Oyl. Also there ought to be a stronger purging, and when they have voided their excrements, the Longanum, which is the place affected, must be annoyed with it. As for Simples, they are *Acacia*, *Hypocistis*, the juice of *Sumach*, with liquid *Allome* or *Nitre*, but the Compounds are the Troches of *Andron*, and those that are called *Sphragides polydis*, and with fat *Wool* and such like; for the flesh is made stronger by Astringents, and loseth its readiness to breed living Creatures, and thrusts forth the *Ascarides*. *Andron* his Troches are made thus. Take flowers of Garden Pomegranates ten penny weight, Galls eight penny weight, Myrrhe four penny weight, long Birthwort, and as much Vitriol, Saffron, scissil Allum, dregs of the Oyl of Saffron, Myss, Frankincense, of each two penny weight, they are powdered and mingled with astringent wine, or with Vinegar. But *Sphragis polydis* is thus. Take scissil Allum three penny weight, Frankincense four penny weight, Myrrhe as much, or eight penny weight, Vitriol two penny weight, flowers of tame Pomegranates twelve penny weight, Bulls gall six penny weight, Aloes eight penny weight, make them up with sharp wine: But that which is made with fat *Wool* is thus made. Take fat *Wool* forty penny weight, lead powder, shales of Bitumen, of each ten penny weight, round scissil Allum, Pomegranate shells, Galls, Myss, Vitriol, Frankincense, of each five penny weight, Myrrhe two penny weight, lees of Oyl eight Hemina. Those that are of riper years must be purged with sharper and hotter remedies, as with *Diapira*, and with Oyl mixt with wine, in great quantity, and other things infused, as salt pickle, the decoction of Centaury, with Nitre and Honey, or Coliquintida, *Chamaeleon*, *Anchusa*, *Lupinus*; then Oyl of Cedar must be given in Clyster, and after that rest; often repeating the same method of cure, also take salt flesh, scraping away the fat, and cut it long and round, and thrust that into the Anus, and binde it in, to hold it there so long as may be, and then loose it, and inject again the foresaid things, and let us often repeat the same remedies.

## CHAP. XXXIV.

## Of Worms that breed without the Bowels, and chiefly of Maggots.

THE living Worms that are bred in the head, the brain, the liver, milt, bladder, reins, muscles, proceed from the same causes Worms in the guts doe, and are destroyed by the same remedies. But those Worms *Hippocrates* calls *Eulas*, the English call *Maggots* or *Gemils*, they are Worms without feet, not unlike to *Ascarides*, but that they are shorter a little, and thicker considering their length: There is no man almost that hath not seen these in Carrion and corrupt flesh, and sometimes in limbs that are dead by the negligence of Chirurgions, when as they apply a remedy that purifies together with the wound or ulcer. *Hippocrates* calls *Eulas* Worms bred in dead bodies. *Suidas* calls them *il beasts*, *fish-eaters*. *Lucretius* calls them cruel *Vermis*, and *Plinius*, Worms from corruption and putrefaction of the excrements boyling forth. *Homer* in his *Iliads*, 19 and 24, saith they are Worms arising from putrid matter, that are far smaller in the ears than in other ulcers: And *Celsus* writes, that they are called *Eula*, which *Latin* writers call improperly *Earmoths*, since they agree with them neither in form nor figure nor in any mark whatsoever. Lastly, those small Worms that breed from Flies egges in flesh, in Summer, (the English call them *Flie-blowers*, and the Germans *Maden*) as *Camerarius* observed, are reckoned amongst *Eula* or *Maggots*. But those *Eula* or *Maggots* that breed in Hogs flesh or Bacon, have a proper name given them by *Festus* and *Peronius*, who call them *Tarni*, *Maggots*. Have either a tayl, or they are without a tayl: Hens feed on both kinds of them, and so it is likely other Birds doe. To make a woman conceive *Hippocrates* prescribes three or four parts of those that have tayls, bruised with *Origanum* and Oyl of *Roses*, to be laid to the mouth of the matrix. In his first de morb. mulier. and in another place of the same book, he bids apply with *Wool* the heads of these Worms mingled with the Secondine of a woman, and Allum of *Egypt*, and goose grease.

It is reported that *Democrates* of *Athen*, when he was a youth, and was sick of the Falling sickness, went to *Delphos*, and enquired of *Apollo*, what he would advise him to take against this troublesome disease, and that *Apollo* answered;

Take the greatest Maggot you can finde  
In a wilde Goats head, and fast binde  
That in a sheep-skin, &c.

Democrates

*Democrates* having heard the answer of *Apollo*, he repaired to *Thesmolus Democritus*, who was then ninety years old, and he wondering at the providence of God, expounded this Oracle that was so doubtfull: Saith he, by nature the head of a wilde Goat is full of abundance of Worms, neer to the basis of the brain, and when he neeleth, many Worms fly forth at his nostrils; you must therefore lay a garment under the Goat, that these Worms may not touch the ground, but that you may catch them before, and so taking one or two of them, put it into a black Sheep-skin and binde it to your tender neck, and this saith he, is a natural remedy against this disease. These things are good against Maggots bred in ulcers and wounds in man or beast. First cleanse the parts affected, with the juice of Frogs, the juice of Celandine, Sea water, or brackish water, with the decoction of Honey, Worm-wood, Horehound, Peach-leaves, Groundfel, juice of Betes, and Wine; then to kill the Worms, strew on Pepper, Salt Peter, or Allum in powder, Hellebore, Henbane, round Birthwort, Vitriol, or wash the fore-places with the juice of river Calamint, or the decoction of Centaury, or with the juice of Leeks or Horehound. *Johannes Agricola* prescribes Bugloss, but *Pliny* prefers Aristolochia with Honey; and *Paracelsus* commends juice of Celandine. *Montanus* commends Nitre before all other things. *Vegorius* bids to wash the sores early in the morning with cold water, and to drench them thoroughly, if he affirms, that the Worms by this means will be so contracted with cold that they will soon fall down. *Actius* commends Poly, and Worm-wood mingled with Pitch, and he commends the anyointing of the parts with falling spitte. *Hildegarde* strews on the pith of Smallage, the shell of a Tortoise, Bees that are dead in the Hive, the leaves and the bark of the Plum-tree, powdered and sprinkled on the ulcers. *Bayus* applies quick lime tempered with the sharpest Vinegar. The places where the Worms are being sprinkled with the juice of *Hippia*, will be presently cured, saith *Tardanus*; but what this *Hippia* is, no man hath determined: Some think it is wilde Tansey, some say 'tis *Potentilla*; *Gesnerus* understands it to be Chickweed, which by its sharp and Nitrous faculty (as the Betes have) kills all the Worms.

## CHAP. XXXV.

## Of Nits.

Nits in the Greek are called *Doreas* and *Cumidas*, the Italians call them *Lendine*, the Spaniards The Name *Liende*, the Germans *Nist*, the English *Nits*, the Muscovites call them *Guida*. These are little white living creatures, most like to *Synon*, if they had but feet, but they are twice almost as small; and their body is somewhat long, out of which *Aristotle* saith that nothing else can breed: Crackt between the nails they make a noyle and die, they are not found only in the hair and eyebrows of men, but they abound also in the hair of Oxen and Cattel that are leape, and wanting feet, yet they will stick so fast sometimes, that you may as easily pull off the hair by the roots as pluck them off. *Trouta* not improperly calls them *terrestrial*, hair-eaters, for as *Snails* live on the juice of herbs, so these live on the moisture of the hairs, and feed thereon. The Philosopher Their Origin affirms, that they proceed from the copulation of Lice, and therefore are called their egges. They nay, are like to the flowers of *Jesemine* that grows with us. For as *Jesemine* brings flowers without seed, so Lice bring forth egges without young ones in them. They die either for want of nourishment, or Their End by using a Comb with close teeth, or by the use of such Medicaments as the old and new Physicians prescribe abundantly. *Pliny* mingleth Allum with Vinegar, or Vinegar with gill of a Calf, and also saith, they are killed with Goats milk. Also he commends Nitre mingled with *Terra Semicis* and smeared on, and the powder of Harts-horn drank in wine. *Abinzar* prescribes, to annoynt the hair with the lesser Centaury, and Alkitrum. Brimstone in Vinegar takes away Nits, as also Oyl mingled with Lie. *Marcellus* doth very much commend Hogs dung mingled with wine and juice of *Roses*; also to annoynt with Honey and Sal Armeniack, but chiefly Oyl of Radishes with a strong lie. *Hildegarde* provides a lie made of Date-stones, which being mingled with Oyl of Radishes roots, will kill the Nits. *Ardonus* mingles some sublimates of Quick-silver with spirit of wine: And he saith also, that if the head be first wet with a Hens egge, and then with the juice of Sow-bread, or Sea-water, that the Nits will never breed again. *Gilbert* an English man highly commends the gall of any Creature, as also all bitter things, cleansers, and Aromaticall Drugs, with the juice of Marigolds.

## CHAP. XXXVI.

## Of Aurelie, and a Wood-worm called Teredo, without feet.

THAT which the *Latins* call *Aurelia*, the *Greeks* call *xyumalis*, the name is borrowed from the golden colour which appears in most of them. It hath no mouth, nor yet any apparent parts, nor doth it void any excrements, nor yet eat, or move, unless it be moved by some body, or hurt. That which *Pliny* writes, that a *Chrysalis* hath a hard body, I think that is meant in respect of a Catter.

The Name and Description.



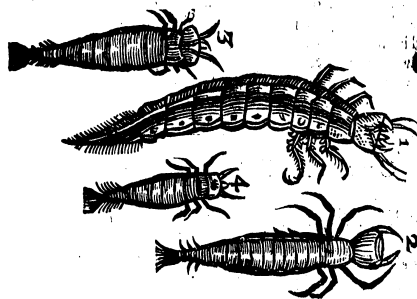
Caterpillar. But that which he adds that it will move if a Spider touch it, though I know this to be true by experience, yet I doubt he borrowed those words from the Philosopher, and interpreted them amiss. For the sense seems to be thus. *They move if they be touched, and they are covered with ps. es like to Cobwebs.* Aristotle speaks nothing here of a Spider passing over them, as *Pliny* seems to translate it. Aristotle shuts the *Aurelia* not only out of the number of Insects, but also of living Creatures, and determines them to be as it were the Caterpillars' eggs. But what agreement is here with an egg? That is laid by another living Creature, and is void both of actual life and motion. The *Aurelia* is laid by none, but is changed from one to another, for it changeth its former shape into another shape, and retains both life and motion, not in possibility of being, but actually. But that doth not take away the life of it, because it neither eats, nor increaseth, for Dormice sleep all the Winter and eat nothing. The life of it doth resemble that sleep which is partly waking, wherein men are not properly awake, nor yet asleep; but are alive, and move a little. But I conjecture that the Philosopher wrote this, that he might confirm that Axiome of his to credulous posterity, that all Insects either lay eggs or little Worms. His words are these. *Insects first breed Worms, but that which is called Chrysalis, is an Egg, and afterwards from this is bred a living Creature, that at the third changing hath the end of its generation.* Yet it is manifest enough by what I said before, that an *Aurelia* is no Egg, and it ought not to be called a generation, but a transmutation of a Caterpillar into this, and of this into a Butterflie. I say this for that purpose, that such as adore Aristotle for a God, may remember that he was but a man, and that he was subject to humane errors. There are two kinds of *Aurelias* that I have seen, some are downy, and others smooth, both are of divers colours, and sometimes they are Gold coloured, which are the true Chrysalides, and others that are but battard ones, are without any colour of Gold. They have their Original from the death of the Caterpillars, which as they do waste by degrees in certain dayes, so by degrees their covering grows continually more hard, and changeth into an *Aurelia*. These again the next Spring or Autumn, by degrees losing their life, a Butterflie comes forth of them that is bred by the like metamorphosis. What use they serve for, for the good of man kinde, I am wholly ignorant of. I know well enough how much they perplexed Aristotle's wit by their wonderful transmutation; and they set forth to us the boundlesse power of Almighty God.

George Agricola only propounds to us the *Teredo* without feet, which from the brazen colour of it, he call *Kupter-worm*: It creeps like a Serpent, saith he, because it wants wings and feet. It is as thick as a small Goose quill, and it is as long as a Scolopendra: It is round, and breeds under rotten wood, and sometimes found hard by the Scolopendra, or long Bar-wig. You may easily finde the figure of it placed amongst the Scolopendrz.

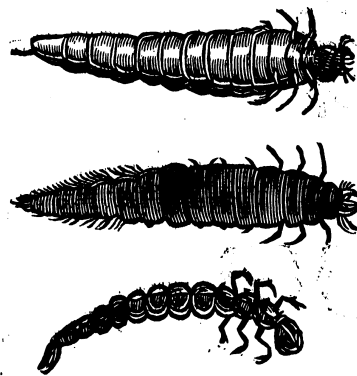
## CHAP. XXXVII.

Of Water Insects without feet, and first of the Shrimp or Squilla.

WE said before that all water Insects were with feet or without feet. Some of those that have feet, swim with six feet, as the Lobster, the Shrimp, the lake Scorpion, the Evert, and the Sea-lowe; others with four feet, some with more. We shal treat of them severally. The Squilla an Insect differs but little from the fish Squilla, but that it hath the sail-yards much shorter, and a more red colour, or rather a more earthly colour. Some of these are covered with a thin shell, and some again are smooth and naked. Those with shells live chiefly in small Brooks, and stick to the roots of Reeds or water-flags: They are of a yellowish colour; and sometimes of a white or Ash-colour. They go only with six feet, the rest that are



joyned to them, serve in stead of fins. The naked ones are either soft or hard. The soft ones are represented well enough by this figure, only suppose their heads to be of a bright Bay colour, and their body died with a dark Ash-colour. All those that are covered with a hard crust are made with joyns, but some have round joyns, others other fashions. The form of the round joyned is exactly represented here, if you suppose him to be easily dyed with a lighter red. And such is the colour of the first and second

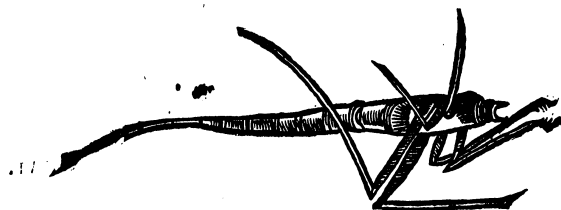


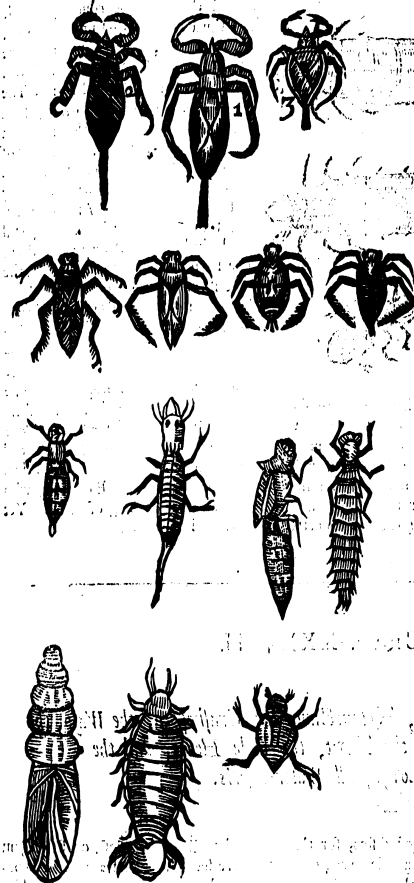
upon the other as the Fishes Squillz doe in coupling, and when they grow bold and have liberty, they fill the Females with young. The time when they are ready for this is signified by a gentle biting: The Female takes hold with her mouth, and what she layes hold on the kills, and gives part of it to her companion; for they couple at the mouth, as Crabs and Lobsters doe. But what use they serve for in physick, I cannot finde either in writers or from Empiricks, who either knew not these Squillz, or thought them not worthy to say any thing of them. Yet this is certain, that in April and May there is no better bait to catch Fish with.

## CHAP. XXXVIII.

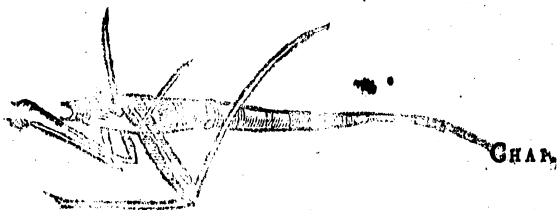
Of the Locust, Scorpion, Notonectum, the Grasshopper, the Wasp, the forked Claw, the Newt, the little Heart, and the Lowse, all Water-Insects.

THE Insect-Locust, is like the Lobster, for that cannot be called either *Besh* or *Rish*: you see the figure of it: it is of a pale green colour: I have seen three kinds of Lake Scorpions, and I have them by me: the first is somewhat black, the other two are like to white





land: we call some Insects of the water *Neon da*, which do not swim upon their bellies as the rest do, but upon their backs, from whence it is probable that men learned the art of swimming upon their backs also. Some of these have eyes, shoulders, and bodies all black, some are green, some are fiery coloured, and some pitch coloured. For you shall seldom see two of them of the same colour; nature hath so variously spotted her self in adorning them. Water-Grasshoppers hold the form described, but their eyes are all black, and their bodies are all coloured. The Wasp hath a brownish body all over, except the black eyes. The Forked Claw hath almost the same colour, but it is more full, it seems to want eyes, but it hath them hid within, whereby it both sees and perceives the object. The Lizard is of divers colours, and delights in catching Fish, it is common about the British shores, where it lyeth in wait to catch Fish. The *Corculus* hath the just fashion of a heart, the feet and head being taken away; it hath very little black eyes, and six legs of the same colour, each with two claws. The Sea-Louse is an Insect that is an enemy to all kinde of Whales, which by biting and tickling it puts into such a rage, that they are forced to run upon the sand, and hasten to dry land: I know nothing concerning the use of these creatures; but I seriously exhort posterity to search out the use of them.



## CHAP. XXXIX.

Of the Flea or *Afellus*, and the *Scolopendra* found in the Sea.

THE Flea, or Sea *Afellus* is like to a soft *Squilla*, but it hath but four feet (as I may say by *Gesner* leave) and by often and long leaps it frees it self from having many feet. It is called *Afellus* from its leaping, *Aristotle* calls it a Flea; from its bunch-back it is called a Sow: it is of a wan colour with blackness; the length of those that are in rivers is the breadth of ones finger, and their breadth is not above half a finger broad. But the Sea fleas are larger, which when the tyde flows are seen also oft-times in fresh waters. It shewes a wonderful deal of agility when men strive to catch it, or do but look upon it.



are bred, and do live.

The Sea *Scolopendra*, sometimes is of a grey colour, and sometimes you shall see others that are more red. These are longer and leaner, that is shorter and thicker. I saw both kinds in the year 1578. in coves of Oysters. For they are not found in the deep sea, as *Gesner* supposeth, but in the muddy standing waters, where the Oysters are fatted, there they lye hid, *Numenius* warned Fisher-men concerning these, when he said;

See therefore that you let not ingender,  
The stupid *Julii* or deadly *Scolopendra*.

They are as *Aristotle* writes lesse than the land *Scolopendras*, but not differing in their form. *Numus* the Physitian makes of these a remedy to hinder hair from growing, or a depilatory, and highly commends it in his 34. Chapter. Take Frankincense, Vitriol, of each two ounces, Sea *Scolopenders* three ounces, grinde them all well, and mingle them with the powder of Quicklime, then pull out the hairs first, and anoynt the places with that.

## CHAP. XL.

Of Water Insects without feet, and first of *Oripes*.

NO Philosopher that understands as he should, will deny but that snow is water turned to froth, by long subliming in the air. In this Worms are bred which the Greeks call *serms*. *Aristotle* writ something concerning these, which History I will briefly touch. In snow there are bred hairy Worms, very sluggish, and that move slowly, wherefore I reckon them amongst Worms without feet, so soon as they are taken out of the snow they die, as the Worms bred in the fire die, being taken from thence: with snow that is old and begins to look red, they become red also, but those that are found in new snow are white. It is, saith he, a certain thing that snow can no more corrupt than fire can. And indeed they cannot corrupt, yet in both of them are living Creatures bred, and they are nourished in both. I cannot in any wise consent to *Eustathius* the Scholiast upon *Homer*, who affirms, that snow grows red from *Minium*, because those places are of a Cinnabrous quality, whence he conceives, that from the vapours rising from Cinnaber, the snow becomes red: I will not deny but that it is so in some places. But whether the Interpreter be pleased or not, we must needs grant that in some places the snow grows red, where no Cinnaber is. *Strabo* makes mention of such places in these words. In *Charaxena* and the Countrey of *Cambicum*, and in places neer to the mountains of *Caucasus*, some little beasts are bred in the deep snow, which *Apollonius* calls *axaruga*, and *Theophrastus* *sermes*, that is, Mountain little hairy Worms, like unto the greater *Teredines*. I think their generation as admirable, as of the fire Worms; yet living Creatures are more easily bred in snow, than in fire, because in snow there is much air, earth and spirit, all which the fire consumes abundantly. And if the heat of the Sun happen to be with these, I shall use *Sco-liger* words, they make dung that smells the sweetest of all ordure. Also they are bred in abundance in *Carimbis*, as *Joach. Vadianus* reports. But *Strabo* in his Comment upon *Pompon. Mel.* adds a thing that is admirable, saying that these Worms are full of excellent water, which Travellers

Travellers take, by breaking the bladder or coat it is in, and they drink this pressing it forth gently. For it is very wholsome and seasonable when the fountains are troubled, as it falls out often in great snows.

## CHAP. XLI.

## Of Horleeches.

A Blood-sucker or Horleech, in Latin *Hirudo*, in Greek *ἰχθυόειρα*, in Hebrew *Malukh*, in French *Sanguisue*, in Italian *Sanguisuela*, in Spanish *Sanguisuela*, in High-Dutch *Einigel* *so das blut saugt*, in English a *Horleech*. These are water Worms that thrive exceedingly after the blood of living Creatures, and they will fill themselves with it sometimes till they burst and die. Some of them are without any passage through their belly, some are open behind; we give you the pictures of them here. *Europe* hath scarce any open behind, but in *America* and

*India* they are common. Those that are not open behind, are obvious to every man, and when they are filled with blood, their skin seems check'd with fibres: Some of them are of divers colours, some green, black, brown, yet not venomous, only the bright bay and Chestnut colours, that are like to pills of trees. They breed chiefly in standing pools, where Cattel are wont to be waded, for from their feet earth and foulness are washed, and fall to the bottom, to say nothing of the sediment of their dung, out of which, that want not vital heat, living Creatures are bred. Once bred, they most greedily thirst after blood, and therefore they lie in wait in the very entrance of the pools, that they may light upon Horses, Oxen, Elephants, &c. so soon as they come to drink for thirst of cold water. *Pliny* writes, that they are so troublesome to the Elephant, that the beast is by their tickling and sucking in his snout, almost mad; which doth manifestly shew the wonderful power of Insects: For what is there greater than an Elephant? and what is there more contemptible than a Horleech? Yet the greatness and wit of the Elephant must give way and yield to this Worm. They feed most on blood of beasts, and watry bloody matter; yet when they want sustenance, they fill themselves with the filth that riseth from the water. *Pliny* saith they vanish in the Spring, l. 9. c. 51. but we see that season to be most fit for the breeding of them. And indeed I can see no reason, that when they have overcome the Winters cold, they should not be able to stand out the Springs mildness. And this we all know, that Horleeches will die in the Winter, unless they be carefully preserved in warm water, and fed with blood very plentifully. If any man swallow a Horleech, some persuade us to drink pickle, others snow-water: But *Aesculapides* bids us first to wash the mouth, and to put a soft Sponge wet in cold water into the mouth, that the Horleech sticking to the Sponge may be drawn forth.

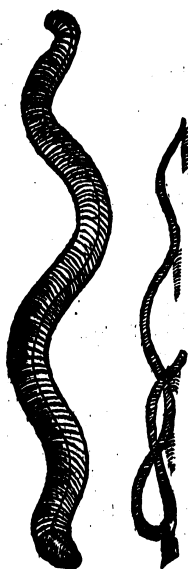
After this he prescribes the juice of Duck-weed, and to cover the neck with cooling plaisters. But *Apollonius*, whose surname was *Mus*, gave the sharpest Vinegar with pickle to drink; but those that gave snow, did first warm it, and used it being dissolved, and they did use meat and drink at fit times to make the belly soluble, that they might drive forth the Horleech, for they report that so they will oft-times come forth with the excrements. *Gal. l. 1. de Amidol.* In the days of *Pliny*, wicked men did privily give Horleeches to their enemies to do them mischief; but *Rue* with Vinegar, or only Butter, (as against all venoms that did exulcerate) were a present remedy, lib. 20. c. 13. and lib. 28. c. 10.

Their

Their use in physick is manifold. For some (I use *Galen* words, lib. de different. sanguinis detrahendi modis, Tract. 10.) take Horleeches and put them up, and they use them diversly: For when they are made tame they are easily put upon the skin; but those that are taken must be kept one day, and must be fed with a little blood; and so it will be that whatever venom they have in them, they will soon cast forth. But when we have need to use them, that part to which you will apply your Leeches must be first rubbed with Nitre, and must be anointed, and scratched with your fingers, that by this means they may fasten the more greedily; but you must cast them into warm water that is contained in a large and a clean vessel, then you must lay hold of them with a Sponge, you must cleanse them with your hand from all filth and dirt, and so they will be fit to be applied. And when you have fastened them on, lest that part they stick to should grow cold, you must pour on warm Oyl: But if they be to be applied to your hands or feet, you must thrust them into the warm water, that the Leeches are cast into. And if they will not hold fast, you must cut off their tails with a pair of Cizzers; for when the blood is drawn forth they will not leave off sucking, until you sprinkle salt or ashes upon their mouth: When they are taken off, that venomous quality they use to leave behind must be drawn forth with a Cupping glass; and if that may not be done, you must use a Sponge to foment the place. And if yet any bloody drops run forth, apply meal and Cummin, and then binde on some Wool wet with a little Oyl. But if yet the blood will not stop, lay on a linnen cloth wet in Vinegar, or burnt glass, or a Sponge first put into liquid pitch, and afterwards burnt. And this also you must observe, that Leeches draw that blood that is next the flesh, and not that which is contained in the Centre of the body: Men use them commonly in stead of Cupping glasses. Mark also that you must take them off when they have drawn half the blood. And you must beware that the blood run not forth so long, until it be sufficient: For the part it self will grow cold, both by reason of the Leeches that are naturally cold, and because of the air that compasseth up about. So far *Galen*. But *Cardan* bids us not to anoint the place with Nitre, but with milk, lest they may fasten the sooner; and withall to pinch the Leech close, that striving for revenge he may open the vein, lib. 7. de res. var. c. 28. What help they were to *Dionysius* the Tyrant of *Heraclia*, we may read in Histories, who representing rather a beast than a man, for he died with a mighty great paunch, had been eaten by the Worms long before, unless Horleeches had been applied to both his sides, and drawn forth daily some quantity of the humours he was charged with. It were too tedious to reckon up all the melancholic and mad people, that have been cured by applying Leeches to the Hemorrhoids in their fundaments. Yet I may not over-pass the Noble *Richard Cavendish* (the most learned Uncle by the fathers side of that famous Navigator through the world *Thomas Cavendish*) who was perfectly cured of his Gowt that had held him many years, only by applying Horleeches to the Emrods in *Aug* every moneth, so that now to the great wonder of all the Court, he walks alone without any help, and being sound and void of all pain, he lives an old man. Also Horleeches set upon the fundament, will wonderfully suck back the humours that run from the whole body to the joynts, that they presently ease the pains like a Charm. This I proved at *Lyon* upon an excellent Musitian, one *Rosolus*; who for the great pains he endured, and by continual waking, fell into a burning Fever, with raving, in the Dog-days, at which time *Hippocrates* saith it is dangerous to purge. It is in this case such a remedy, that it is to be preferred before all others, for they draw from the whole body without any trouble or losse of a mans forces. *Jac. Aubert. Exercit. 50. progymnasma. Fernel. Abulr. Godfridus a Cenani, a Venetian*, a famous man, and my very great friend, for just and lawfull causes, who told me that he saw one who had the joynt Gowt, who lived many years free of all his pains, only by applying Leeches to the part that was in pain. *Matth. de Grad. and Savanrula. Jacob Dourner. Apolog. lib. c. 3.* persuade the same remedy. Also *Gilbertus Anglicus* reports, that the Lowfie disease generally is to be cured with the ashes of Horleeches boyled with Storax: For they are not only usefull for men whilst they are alive, but when they are dead and burnt to ashes. *Pliny* reports, lib. 32. c. 7. that Horleeches will black ones hair, if they be corrupted in black wine for sixty dayes: Others bid us take one sextarius of Leeches, and let them lie to corrupt in two sextarii of Vinegar, in a leaden vessel for so many dayes, and then to anoint with them in the Sun. *Soranius* relates, that this medicament is of so great force, that it useth they hold Oyl in their mouths that die the hair, it will also black their teeth. *Meges* writes, that live Frogs putrefied in Vinegar, will take off the hair, but the ashes of Leeches anointed with Vinegar will doe the same.

## CHAP. XLII.

## Of Water-worms.



IN waters both salt and fresh, great and small Worms will breed of putrefaction, especially in Summer, very like Earth-worms, but they want that knot or chain about their necks: Also they are by far more sharp and lean; oft-times they lie in the sand, and they cast up earth out of their holes, as Earth-worms do: In sweet waters that are standing, and not deep, there is found a kind of Worms of a full red, that resemble in shape the *Teredo* without feet, but that they have greater heads. Their tail is forked, whereby they stay themselves, till lifting up their heads they may find a place to fasten the rest of their body, and so they creep upon the mud and stones, and so they move in a brandishing manner crookedly. In Summer, when it is clear weather and hot, they come forth together in great numbers; but if the mud move never so little they presently withdraw themselves. The English call them *Summer-worms*, either because they are seen only in Summer, or they die in Winter. In the *Mediterranean Sea* there is a round Worm found as great as a great Snake, and of the same colour, but it hath neither head nor tail, as *Wekerus* observes. Sometimes it is twenty foot long. What may be the use or nature of these I have not yet observed. But I hope that others will discover that light that shall show us both. Yet this is certain, that those Worms serve for baits to catch Fish, especially those small red ones, and Fisher-men diligently seek after them for that purpose. We call them *Water-worms*, because as Earth-worms will not live long in water, so Water-worms put upon dry land soon die, they wanting Air, and these for want of water.

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